

**AIR POLLUTION CONTROL OPERATION PERMIT REVISION**

EI FACILITY NO: 445031180

PERMIT NO.: 445031180-P12

TYPE: Operating Permit Revision for a Part 70 Source

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Thilmany, LLC

Street Address: 600 Thilmany Road  
Kaukauna, Outagamie County, Wisconsin

Responsible Official, & Title: Mr. Keith Morgan, Mill Manager

is authorized to operate a kraft pulp and paper mill in conformity with the conditions herein.

**THIS OPERATION PERMIT EXPIRES May 20, 2013 [Section NR 407.09(1)(b)1., Wis. Adm. Code] A renewal application must be submitted at least 6 months, but not more than 18 months, prior to this expiration date. [s. 285.66(3)(a), Wis. Stats.]**

No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely application for renewal of the permit. If you submit a timely application for renewal, the existing operation permit will not expire until the renewal application has been finally acted upon by DNR. [ss. 227.51(2), 285.62(8)(b), Wis. Stats., and NR 407.04(2), Wis. Adm. Code]

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Oshkosh, Wisconsin, 11/16/2011

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By /s/ IRS  
Imelda Stamm  
Environmental Engineer Supervisor

## Preamble

An Asterisk “\*” throughout this document denotes legal authority, limitations and conditions which are not found in construction permits and are not federally enforceable.

**Historical Summary of Permits and Orders Issued to the Facility** Sources still at the facility are covered by the following permits issued to the facility:

Permit/Order Number	Issuance Date	Description
86-DLJ-058	November 1986	Authorizes venting of TRS gas from 4 digesters, blow tanks, and turpentine condenser systems to the lime kiln for incineration
86-SJK-072	July 1987	Elective Operating Permit (EOP) establishes alternate SO <sub>2</sub> limits under NR 417.07(5), other limits, fuel-type and monitoring restrictions for B07, B08, B09, B10 and B11. B07 is permitted to burn wood waste, paper broke, residual fuel oil and natural gas. B08 and B10 are permitted to burn Kraft liquor, residual fuel oil and natural gas. B09 and B11 are permitted to burn bituminous coal, paper broke, residual fuel oil and natural gas. B11 is also permitted to burn #2 oil. Coal sulfur content limited to 4.4%. Residual oil content is limited to 2.5%.
86-SJK-072A	January 1991	EOP altered to authorize construction of a 174 foot ESP bypass stack for burning natural gas or residual fuel in B08 and B10, with PM limit of 0.287 Lb/MMBtu.
86-SJK-072B	August 1991	EOP altered to include bituminous coal/petroleum coke blend for B09 and B11, with up to 30% by weight petroleum coke, 275 ppm nickel and 95% ESP removal of nickel, to remain below NR 445, Wis. Adm. Code Table 3B threshold.
86-SJK-072C	November 1992	EOP altered to: 1) authorize construction of ESP bypass stack on B09 and B11 when burning at least 85% natural gas, and boiler startup, and 2) allow burning 13% Tire-derived fuel in B07, 7% TDF in B09, B11 each; and 4 tpd Presto Products polyethylene fuel in B07, B09, B11 combined.
86-SJK-072D	June 1993	86-SJK-072C altered to: 1) restrict residual fuel oil use in B07, B08, B10 and P12 combined to 333,333 gallons per month and 25 ppm nickel, and 2) reduced pet. coke weight fraction in B09 and B11 to 25%; to remain below NR 445, Wis. Adm. Code Table 3B threshold.
86-SJK-072-R1	March 1997	Alterations which: 1) replaced limits in permit 86-SJK-072D on residual fuel oil and ESP, with residual oil limits of 266,667 gallons per month and 16 ppm nickel; and, 2) replaced limits in 86-SJK-072B on coal/coke and ESP, with pet. coke limits of 1,583 tons per month and 400 ppm nickel. Alteration also added control device requirements.
86-SJK-024	May 1986	Authorizes use of lime kiln and wet scrubber with continuous monitoring requirements of TRS and oxygen (O <sub>2</sub> ) and restriction to burn only natural gas (NG).
86-SJK-024A	July 1986	Modification of 86-SJK-024 permit to authorize use of #6 fuel oil in addition to natural gas. To avoid PSD, set a NO <sub>x</sub> limit to insure NO <sub>x</sub> increase was less than 40 tons per year.
86-SJK-024B	November 1991	Modification of 86-SJK-024A to authorize discontinuation of monitoring bleed rate from the lime kiln wet scrubber but continue monitoring and recording liquid flow rate, temperature, supply pressure, and pressure drop across scrubber and centrifugal separator

Permit/Order Number	Issuance Date	Description
86-SJK-024C	June 1993	Modification of permits 86-SJK-024B, 86-SJK-072A, 86-SJK-072B to limit source operations to ensure the NR 445 250 pounds of nickel per year limit is not exceeded.
86-SJK-024-R1	March 1997	Modification of 86-SJK-024C and 86-SJK-072D authorizing nickel content, usage, and weight fraction of petroleum coke in B09 and B11; authorizing nickel content and usage of residual fuel oil for B07, B08, B09, B10, and B11; authorizing removal of control efficiency as requirement (unable to demonstrate continual compliance with limitation) the new configuration did not increase the potential amount of emissions of an air contaminant not previously emitted
90-POY-020	February 1991	authorize use of B11 to operate as a back-up combustion system for NCG in order to control TRS emissions from the pulp mill
90-POY-020A	August 1992	modification of 90-POY-020 authorizing a change in SO2 emission limitation for B11 without changing allowable monthly SO2 emission limits (emissions from NCG containing TRS was set to avoid a PSD review and heat input of B11 was included to ensure that there was no overall increase in SO2 emissions)
90-POY-020B	August 1993	modification to 90-POY-020A authorizing B11 to burn TDF and Presto Products polyethylene in addition to other permitted fuels
93-CTS-413	July 1993	Modification authorizes paper coater on #11 paper machine with emission restrictions in order to remain below NR 405, Wis. Adm. Code limits for PSD applicability.
95-POY-098	July 1995	Authorize use of back-up boiler for maintenance and emergency outages with stack dimension requirements, fuel type and hour of operation restrictions
99-SDD-109	September 1999	Construction permit authorizes new collection tanks: T09 - blow heat condenser condensate and T10 – central foul condensate, and establishes requirements for P12, B11, and MACT 40 CFR Part 63, Subpart S affected sources.
03-MHR-010	April 2003	Authorized construction and initial operation of 10-color flexographic press P72
99-SDD-109-R1	Issuance date of permit number 445031180-P10.	A revision to construction permit 99-SDD-109 to correct an error in the emission limit for particulate matter for boiler B11. The boiler was modified in 1999 after installation of LVHC off-gas piping. The modification causes the applicable emission limits to be 0.10 pound per million Btu (mmBTU) heat input per s. NR 415.06(2)(c), Wis. Adm. Code, instead of 0.30 lb per mmBTU. A lower mass emission rate of 37.9 pounds per hour is also established.
445031180-P10	May 2008	Facility wide permit renewal
09-POY-259	February 2010	proposed modifications to the Nos. 11, 12, 13, 14 and 15 paper machine complexes to create production increases on these paper machine complexes
445031180-P12		revise permit administratively to correct NR 445 limits and compliance demonstration that were incorrectly included/changed in the renewal to the original text from 445031180-P01

**The following permits, orders, etc. are adopted, under ss. 285.65(3)9, Wis. Stats., NR 406.11(1)(c) and (d), NR 407.09(2)(d) and NR 407.15(3) and (4), Wis. Adm. Code, by Permit #445031180-P12 which then becomes the primary enforceable document:**

86-DLJ-058	86-SJK-024C
86-SJK-072	86-SJK-024-R1
86-SJK-072A	90-POY-020
86-SJK-072B	90-POY-020A
86-SJK-072C	90-POY-020B
86-SJK-072D	93-CTS-413
86-SJK-072-R1	95-POY-098
86-SJK-024	99-SDD-109-R1
86-SJK-024A	03-MHR-010
86-SJK-024B	
445031180-P01	

### **Stack and Process Index**

#### Significant Emissions Units

Permit Table	Source Description 1	Installed, Modified Date
<b>POWER AND PACKAGE BOILERS</b>		
A	S07, B07, C01, C02 204 million BTU per hour, Wood waste/No. 6 oil/paper pellets/sludge-fired Stoker Power Boiler No. 7. Controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 – nozzle removed).	1963
B	S09, B09, C06, C07 192.4 million BTU per hour, Pet. Coke/coal/other-fired Single Cyclone Power Boiler No. 9. Installed or last modified in 1957. Controlled by multi-clone C06 (1974) and electrostatic precipitator (ESP) C07 (C-E Walther Inc., single stage, 2 field, 1976). S09 equipped with continuous emission monitors for SO <sub>2</sub> and opacity.	1957
B	S09, B11, C11, C07 379.0 million BTU per hour, Pet. Coke/coal/other-fired/non-condensable gases (NCG) Twin Cyclone Power Boiler No. 11. Installed or last modified in 1999. Controlled by multiclone C11 (1974) and ESP C07. Exhaust to S09.	1999
C	S81, B81 96.7 million BTU per hour, 75, 000 pounds per hour (lb/hr) steam at 350 psig, natural gas-fired, Nebraska Boiler Company package temporary boiler.	1999 (rental unit)
<b>CHEMICAL RECOVERY OPERATIONS</b>		
D	B08 S08 and S10 C03 and C04 206.3 million BTU per hour, 75 gallons per minute (gpm) kraft liquor/No. 6 oil/natural gas-fired, No. 8 Non-direct contact evaporator (NDCE) Recovery Boiler. Combined exhaust from B08 and B10 is split, and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). Exhaust from C03 to S08. Exhaust from C04 to S10.	1953
D	B10 S08 and S10 C03 and C04 321.7 million BTU per hour, 115 gpm kraft liquor/natural gas-fired, No. 10 NDCE Recovery Boiler.	1961
E	S05, P08, C05 The No. 8 smelt dissolving tank makes green liquor from molten black liquor solids (smelt from recovery boiler B08) and weak wash. P08 is controlled by scrubber C05 (1975).	1953
E	S06, P10, C10 The No. 10 smelt dissolving tank makes green liquor from molten black liquor solids (smelt from recovery boiler B10) and weak wash. P10 is controlled by scrubber C10 (1975).	1961
F	S12, P12, C13 45 million BTU per hour rotary Lime Kiln rated at 135 tons per day lime output, and main Low Volume High Concentration (LVHC) NCG control device. Exhaust is controlled by a cyclone C13a (1998) and wet scrubber C13. C13 is equipped with 7	1986

<sup>1</sup> Process production rates listed in this column are for informational purposes only and do not imply a limitation on production.

Permit Table	Source Description 1	Installed, Modified Date
	Ahlstrom nozzles (installed 1986, 1993) and 4 Turbotech fine nozzles (installed 1997). C13 is operated with weak wash (pH 8-9). S12 is equipped with CEMs for TRS and SO <sub>2</sub> .	
G	S19, P19, C20 7.125 ton per hour (TPH) Calcium Oxide feed Lime Slaker with causticizing tanks. Exhaust is controlled by spray chamber C20 (Enso-Gutle IT Model 500 installed 1986).	1986
PULPING OPERATIONS		
H	S17, P17 600 ADTP/day Digester, Evaporator, Turpentine Condenser NCG System Digester/evaporator/turpentine condenser non-condensable gas collection system. S39, P39 25 MGD Wastewater Collection and Treatment System	1988 – digester 1991 –NCG system < 1972 –evaporator
I	S20, P20 600 ADTP/day Brown Stock Washer System	
I	S22, P22 Unbleached Pulp Dewatering and Storage System	
J	S26, P26 Black liquor collection and storage system. NSPS applies to 2 of the 17 tanks: the 46% intermediate and the 65% heavy liquor tanks. Their capacity is each greater than 151 m <sup>3</sup> and liquor is stored with a maximum true vapor pressure of less than 3.5 kPa.	
J	S27, P27 Turpentine storage tank (95 m <sup>3</sup> capacity) and transfer operation. NSPS applies because liquor is stored with a maximum true vapor pressure of less than 15.0 kPa.	
PAPERMAKING OPERATIONS		
K	S11, P11 5.0 TPH Paper by No. 11 Paper Machine (Beloit Corp.) with size press.	1993
K	S13, P13 9.17 TPH Paper by No. 13 Paper Machine (Beloit Corp.) with size press (Valmet Co.) and 1-IR and 1-Yankee (natural gas-fired) after-dryer.	1987
K	S14, P14 5.6 TPH Paper by No. 14 Paper Machine (Beloit Corp) with size press (Beloit Corp.) and 1-Yankee after-dryer.	1969
K	S15, P15 10 TPH Paper by No. 15 Paper Machine with size press (Valmet Corp.) and 1-IR after-dryer (Beloit Corp).	1994
K	S16, P16 11.3 TPH combined Paper by No. 10 Paper Machine with 1-IR and 1-Yankee dryer (Beloit Corp) and No. 12 Paper Machine 1-IR dryer (Black and Clawson Co.) and no coaters.	No. 10 – 1948 No. 12 – 1957
FLEXOGRAPHIC PRINTING AND COATING OPERATIONS <i>Abbreviations:</i> 1-Poly means one low or high density polyolefin extrusion laminating station. 1-color 72 inch means a 1-color flexographic print unit with a 72 inch web width. 10 mmbth DFT means natural gas fired-dryer(s) and flame treater(s) with a combined heat input in million BTU per hour.		
L	P33 No. 33 Wax Coater: Coats base paper from the paper machines or purchased paper when wax coatings are desired, 6.4 mmbth boiler B80, 1 corona treater, 11,000 gallon wax tank T33.	Jan., 2001
L	S52, P52 No. 52 Extruder: 1-Poly 62 inch (Egan Mfg)	1979
M	S55, P55 No. 55 Extruder: 1-Poly, 1-color 72 inch, 0.75 mmbth FT (Beloit Corp).	1993
M	S56, P56 No. 56 Extruder: 2-Poly, 1-color 72 inch or primer coating station, 1 other primer coater, and 9.32 mmbth DFT, 3 corona treaters (Beloit Corp).	1973
M	S59, P59 No. 59 Tandem Extruder: 2-Poly, 1-color 80 inch, primer coater, 10 mmbth DFT, 3 corona treaters (Black Clawson).	Sept., 1998
M	S72, P72 No. 72 Flexographic Printing Press: 10-color 74 inch, varnish coater, 4.4 mmbth dryers (Fischer and Krescke)	April 30, 2003
M	S76, P76 No. 76 Flexographic Printing Press: 4-color 74 inch, varnish coater, 4.0 mmbth dryer (Paper Converting Machinery)	April 5, 2001
MISCELLANEOUS OPERATIONS		
N	S45, P45 848,000 tons chips per year Log Storage, Chipping, Screening, Conveying System	1987
N	S49, P49 Mill-wide Haul Roads	1883
N	S50, P50 Red Hills Industrial Landfill with passive gas collection, phase V start	1990

**Insignificant Sources** (The facility has calculation documentation showing that the emissions are less than the NR 407, Wis. Adm. Code Table 2 levels.)

Maintenance of Grounds, Equipment, and Buildings  
Fuel Oil Storage Tanks ( < 10,000 gal )  
Demin and Oxy Scavenging of Water for Boilers  
Purging of Natural Gas Lines  
Boiler, Turbine, and HVAC System Maintenance  
Pollution Control Equipment Maintenance  
Int Comb Eng Used for Warehouse and Mat Trans  
Fire Control Equipment  
Janitorial Services  
Office Activities  
Convenience Water Heating  
Convenience Space Heating ( < 5 mil BTU/hr )  
Emergency Generators  
Cooling Towers  
Chillers  
No. 6 Fuel Oil Tank  
Hog Fuel Handling System  
Coal Crusher & Conveying System  
Dry Ash Conveying & Storage System (baghouse)  
Secondary Fiber Supply System  
Salt Cake Unloading System  
Lime Unloading, Handling & Storage System  
Salt Cake Mix Tank When Exhausted to Atmosphere  
Black Liquor Dust Tank Exhaust  
Pilot Digester  
Coating Kitchen: Aqueous Ammonia Storage & Exhaust Starch Unloading System  
10/12 Color Rooms-Exhaust Hood  
Stock Prep-Starch & Clay Unloading & Mixing  
No. 15 Paper Machine Roll Grinder  
Clay Coating Boilout  
Paper Machine Wire Repair  
Paper Conveying System  
Decorating Dept. Sources:  
    Vulcanizing exhaust  
    Plate room rubber solvent exhaust  
    Barrel washer exhaust  
    Ink room exhaust  
    Ink washup area  
Poly Dept. extruder roll cleaning  
Poly die burn off oven  
Causticizing system grouping (units after the smelt tanks to the Lime kiln not including the slaker).  
    Water treatment plant (incoming process water)  
Sawdust cyclone at box factory  
Laboratories, upper and lower mills

Permit Shield – Unless precluded by the Administrator of the USEPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats, and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply.

The following emission limitations were reviewed in the analysis and preliminary determination for permit

445031180-P10 and were determined not to apply to this stationary source:

1. NR 440.205(1), Wis. Adm. Code does not apply to boiler B07, because it was constructed, reconstructed or last modified before 1984.
2. NR 440.45(1)(b) and NR 440.205(1), Wis. Adm. Code do not apply to boiler B08, because it was constructed, reconstructed or last modified prior to 1976 and 1984, respectively.
3. NR 440.205(1), Wis. Adm. Code does not apply to boiler B09, because it was constructed, reconstructed or last modified prior to 1984
4. NR 440.19(1) and NR 440.45(1)(b), Wis. Adm. Code do not apply to boiler B10, because it was constructed and last modified prior to 1971 and 1976, respectively.
5. NR 440.19(1), Wis. Adm. Code) does not apply to boiler B11, because it was constructed and last modified prior to 1971 .
6. NR 440.285(1), Wis. Adm. Code does not apply to P19, because the slaker/causticizing tanks are not storage tanks.
7. NR 440.45(4), Wis. Adm. Code does not apply to P20, because the work done on the brown stock washers in 1986 is not considered a reconstruction or modification.
8. NR 440.285(1), Wis. Adm. Code does not apply to P26 because of the 17 black liquor tanks, 14 tanks were installed prior to NSPS and NSR dates, and not reconstructed or modified after those dates, 2 tanks have vapor pressures less than 3.5 kPa, and 1 tank functions as a process tank not a storage tank.
9. NR 440.285(1)(c), Wis. Adm. Code does not apply to P27 because the capacity of the turpentine tanks is greater than 75 m<sup>3</sup> and less than 151 m<sup>3</sup> with a maximum true vapor pressure less than 15.0 kPa.
10. NR 440.02(16) and NR 440.42, Wis. Adm. Code do not apply to the coal crusher and conveying system. Although there was work done on the system in 1975, it was not considered a reconstruction, and was not a modification because it did not increase particulate matter emissions.

Part I – The headings for the areas in the permit are defined below. The legal authority for these limitations or methods follows them in [brackets].

Pollutant – This area will note which pollutant is being regulated by the permit.

Limitations – This area will list all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), New Source Performance Standards (NSPS) or Lowest Achievable Emission Rate (LAER). It will also list any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

Compliance Demonstration – The compliance demonstration methods outlined in this area may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding *Limitations* column. The compliance demonstration area contains limits on parameters or other mechanisms that will be monitored periodically to ensure compliance with the limitations. The requirement to test as well as initial and periodic test schedules, if testing is required, will be stated here. Notwithstanding the compliance determination methods which the permittee of a source is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

Reference Test Methods, Recordkeeping, and Monitoring Requirements – Specific US EPA Reference test methods or other approved test methods will be contained in this area and are the methods that must be used whenever testing is required. A reference test method will be listed even if no testing is immediately required. Also included in this area are any recordkeeping requirements and their frequency and reporting requirements. Accuracy of monitoring equipment shall meet, at a minimum, the requirements of s. NR 439.055(3) and (4), Wis. Adm. Code as specified in Part II of this permit.

Condition Type – This area will specify other conditions that are applicable to the entire facility that may not be tied to one specific pollutant.

Conditions – Specific conditions usually applicable to the entire facility or compliance requirements.

Compliance Demonstration – This area contains monitoring and testing requirements and methods to demonstrate compliance with the conditions.

Part II – This section contains the general limitations that the permittee must abide by. These requirements are standard for most sources of air pollutants so they are included in this section with every permit.



**PART I**  
**APPLICABLE LIMITATIONS AND SPECIFIC CONDITIONS**

<b>A. Stack S07 B07 C01 C02</b> 204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed).	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>a. Limitation:</b> (1) 0.30 pounds per million Btu heat input, and 61.2 pounds per hour. [s. NR 415.06(1)(b), Wis. Adm. Code] The permittee shall only fire: (a) bark or wood waste as primary fuel in B07; (b) paper pellets, natural gas, residual fuel oil, paper broke, tire derived fuel (TDF), and effluent treatment plant sludge as alternate fuels in B07; and (c) Other alternate fuels allowed under Condition O.1. [s. 285.65(3) Wis. Stats and Permit 86-SJK-072C]	
<b>b. Compliance Demonstration</b>  (1) The permittee shall operate the multi-cyclone (C01) and wet scrubber (C02) at all times B07 is in operation, except when B07 is fired on only natural gas during a start-up. [s. NR 415.06(1)(b), Wis. Adm. Code and Permit #86-SJK-072-R1]  (2) The permittee shall perform compliance emission testing for particulate matter every 24 months, as specified in Condition O.2.a.(1). [s. NR 439.075(2)(a)1, Wis. Adm. Code]  (3) The permittee shall operate wet scrubber C02 with the following minimum parameter values, based on a 3-hour block average, unless alternate ranges are approved by the department, in writing: (a) a water flow to C02 of 141.2 gallons per minutes; (b) a differential pressure drop across C02 of 2.3 inches water column. [ss. NR 407.09(4)(a)1. and 439.055(1)(e), Wis. Adm. Code]  (4) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) the baffle for bowing and sloping; (b) the shower nozzle for plugging; and (c) all seals and ducts for leakage. [s. NR 407.09(4)(a), Wis. Adm. Code]	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>  (1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for noncondensable particulate matter, and EPA Method 202 to test for condensable particulate matter emissions. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code]  (2) The permittee shall keep monthly records of: (a) The type of each fuel fired in the boiler; and (b) The amount of each fuel fired in the boiler. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 86-SJK-072A]  (3) The permittee shall keep records of: (a) The date of each internal inspection of the control equipment; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code]  (4) The permittee shall monitor the following parameters for the wet scrubber: (a) liquid flow rate to scrubber, in gallons per minute, and (b) liquid pressure to scrubber, in pounds per square inch. [s. NR 439.055(1)(e) and 439.055(5), Wis. Adm. Code]

<b>A. Stack S07 B07 C01 C02</b> 204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed).	
(5) The permittee shall perform periodic inspections of the multi-cyclone to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) cyclone tubes and side walls of hopper area for plugging and erosion; (b) gaskets on the clean side tube sheet and high temperature gaskets; (c) axial inlet spinner vanes for erosion; and (d) solid discharge valve for erosion. [s. NR 407.09(4)(a), Wis. Adm. Code]  (6) The permittee shall perform an inspection of the multi-cyclone hoppers for pluggage and unplug if necessary at least once per shift while the boiler is operating. [ss. NR 407.09(4)(a) and NR 439.055(5), Wis. Adm. Code]  (7) <u>Compliance Assurance Monitoring (CAM)</u> : This boiler is a pollutant-specific emissions unit subject to the CAM requirements of Part 64 CFR. The CAM monitoring requirements are fulfilled by complying with condition A.1.b (3). [s. 285.65(13), Wis. Stats., and 40 CFR Part 64.6(c)]	(5) The permittee shall monitor the pressure drop across the multi-cyclone in inches of water. [s. NR 439.055(1)(b), Wis. Adm. Code]  (6) The permittee shall record the multi-cyclone and scrubber parameters once every eight hours whenever the boiler is operated. [s. NR 439.055(2)(b), Wis. Adm. Code]  (7) The permittee shall keep the following: (a) a log indicating that the multi-cyclone hoppers were inspected at least once per shift while the boiler was operating; (b) dated records of any maintenance or repairs performed as a result of the hopper inspection. [s. NR 439.04(1)(d), Wis. Adm. Code]
<b>2. Pollutant: Visible Emissions</b>	
<b>a. Limitation:</b> (1) 20% Opacity [s. NR 431.04(2), Wis. Adm. Code and Permit #86-SJK-072]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) See Particulate Matter Emission Compliance Demonstration section listed for this source, with the exception of condition 2, which refers to PM testing requirement.	(1) Whenever compliance emission testing is required, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) See Conditions A.1.c.(2)-(7) for particulate matter emissions. [ss. NR 439.04(1)(d) and 439.055(1), (2) and (5), Wis. Adm. Code]
<b>3. Pollutant: Sulfur Dioxide</b>	
<b>a. Limitation:</b> (1) 92.7 pounds per hour averaged over any consecutive 24 hours [s. NR 417.07(5)(b), Wis. Adm. Code and Permit #86-SJK-072] (2) The sulfur content of residual fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code and Permit #86-SJK-072]	

<b>A. Stack S07 B07 C01 C02</b> 204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed).	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour. The average hourly boiler sulfur dioxide emissions shall be calculated for each boiler by dividing total sulfur dioxide emissions for each day by the hours of boiler operation for that day. These records shall be available for inspection by the Department upon request. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, the permittee shall use US EPA Method 6, 6A, 6B or 6C. [s. NR 439.06(2)(a), Wis. Adm. Code]  (2) See testing, reporting, and recordkeeping requirements for residual oil in Condition O.5. [s. NR 417.07(7)(a)4., Wis. Adm. Code]
<b>4. Pollutant: NR 445 Table 3 Hazardous Air Pollutant Emissions ( nickel, arsenic, formaldehyde)</b>	
<b>a. Limitations:</b> (1) *The permittee shall control emissions with Best Available Control Technology (BACT) for nickel and arsenic. BACT shall consist of Current Operating Practices, defined as the following: (a) Maintain temperatures above the boiler grate at 1400 to 1950 °F, (b) Provide a 2.2 second residence time at 1400 to 1950 °F, (c) Operate C01 and C02 whenever the boiler operates. BACT does not apply during periods of boiler startup, shutdown or malfunction. [s. NR *445.07(1)(c), Wis. Adm. Code]  (2) * BACT for formaldehyde shall consist of Current Operating Practices defined under condition A.4.a. (1). [s. NR *445.07(1)(c), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) *The permittee shall demonstrate compliance with condition A.4.a. (1)(a) to (c) through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code]  (2) *The permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code]	(1) *The permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code]  (2) *The permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. The permittee shall record the date of the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code]  (3) * Whenever stack testing is requested, the permittee shall use test methods approved by the Department. [s. NR 439.06(8), Wis. Adm. Code]
<b>5. Pollutant: Alternate Fuel Use Emissions</b>	

<p><b>A. Stack S07 B07 C01 C02</b>  204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels.  Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed).</p>	
<p><b>a. Limitation:</b>  (1) Tire-derived fuel (TDF) may not supply more than 10 percent of the heat input to the boiler or the highest heat input that demonstrates compliance with the emission limit of A.1.a.(1), whichever is less.  [ss. NR 415.06(2)(a) and NR 407.09(1)(a), Wis. Adm. Code]  (2) Effluent treatment plant sludge (residual fibers) may not be fired in a quantity higher than the heat input that demonstrates compliance with the emission limit of A.1.a.(1).  [ss. NR 415.06(2)(a) and NR 407.09(1)(a), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) Prior to burning TDF in the boiler, the permittee shall perform a stack test for particulate matter while burning TDF with wood waste and paper pellets, using the test method specified in condition A.1.c. (1).  [s. NR 407.09(1)(c)1.b., Wis. Adm. Code]  (2) Prior to burning residual fibers in the boiler, the permittee shall perform a stack test for particulate matter while burning residual fibers with wood waste and paper pellets, using the test method specified in condition A1c(1). [s. NR 407.09(1)(c)1.b., Wis. Adm. Code]  (3) When requested by the Department, the permittee shall sample and analyze fuels, other than coal and residual fuel oil, in a manner specified by the Department. [s. NR 439.085(4), Wis. Adm. Code]  (4) The permittee shall calculate the percentage heat input supplied to the boiler from TDF or residual fibers using the following calculation:</p> $P = \frac{\sum_{i=1}^n HC_i * Q_i}{\sum_{i=1}^n (HC_i * Q_i)} * 100$ <p>where:  P is the daily average percentage (of heat input supplied to the boiler) by TDF or residual fibers;  HC<sub>i</sub> is the heat content of the TDF used during the day (expressed in BTU per pound);  Q<sub>i</sub> is the amount of TDF or residual fibers used (expressed in pounds) during the day;  N is the total number of fuels fired in the boiler during the day;  i represents each fuel fired during the day;  HC<sub>i</sub> is the heat content of each individual fuel fired during the day; and  Q<sub>i</sub> is the amount of each individual fuel fired during the day. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) Whenever an alternate fuel listed in condition A.5. a. (1) or (2) is burned, the permittee shall keep the following records for each fuel co-fired:  (a) The daily amount of each fuel consumed, (expressed in pounds for solid fuels, thousand gallons for liquid fuels, and million cubic feet for gaseous fuels),  (b) The heat content of each fuel (expressed in BTU per pound for solid fuels, BTU per thousand gallons for liquid fuels, and BTU per million cubic feet for gaseous fuels),  (c) The daily average percentage of heat input (P) that was supplied to the boiler from TDF or residual fibers for each day of the month (P, expressed in heat input to the boiler).  [s. 439.04(1)(d) and NR 407.09(1)(a), Wis. Adm. Code]  (2) The permittee shall sample fuels using methods and procedures approved, in writing, by the department. [s. 439.08(3), Wis. Adm. Code.]  (3) The permittee shall keep records of fuel sampling and make them available to the Department upon request. [s. 439.04(1)(d) and NR 407.09(1)(a), Wis. Adm. Code]</p>

<p><b>B. Stack S09, B09, C06 and C07</b>  192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.</p> <p><b>Stack S09, B11, C11 and C07</b> 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensable gases (NCG). Last modified in 1999. B09 is controlled by multiclone C11 (1974) and C07 in series.</p>	
<p><b>1. Pollutant: Particulate Matter Emissions</b></p>	
<p><b>a. Limitation:</b></p> <p>(1) 0.30 pound per million BTU (mmBTU) heat input, and 57.7 pounds per hour from Boiler B09. [s. NR 415.06(1)(b), Wis. Adm. Code and Permit #86-SJK-072]</p> <p>(2) 0.10 pound per mmBTU heat input, and 37.9 pounds per hour from Boiler B11, except as allowed under condition O.9.a.(1). [s. NR 415.06(2)(c), Wis. Adm. Code and Permit #99-SDD-109-R1]</p> <p>(3) The permittee shall only fire:</p> <p>(a) subbituminous and bituminous coals as the primary fuels in B09 and B11;</p> <p>(b) petroleum coke, natural gas, No.6 fuel oil, paper broke, and tire derived fuel (TDF) as alternate fuels in B09 and B11; and,</p> <p>(c) Other alternate fuels allowed under Condition O.1. [s. 285.65(3) Wis. Stats and Permit 99-SDD-109-R1]</p> <p>(4) The by-pass stack shall only be used during times of warm up or cool down or when both of the boilers are firing at least 85 percent natural gas, by heat input, and no more than 15 percent heat input of other permitted fuels. [s. 285.65(3) Wis. Stats and Permit 99-SDD-109-R1]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) The permittee shall operate multiclone C06 and electrostatic precipitator (ESP) C07 at all times B09 operates; and multiclone C11 and C07 at all times B11 is in operation, except as allowed under Conditions B.1.b.(9) and (10). [s. 285.65(3) Wis. Stats. and Permit 86-SJK-072-R1]</p> <p>(2) The permittee shall perform compliance emission testing for particulate matter on each boiler every 24 months, as specified in Condition O.2.a. (1). [s. NR 439.075(2)(a)1, Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(3) The permittee shall monitor the following parameters for the electrostatic precipitator:</p> <p>(a) The primary voltage in volts;</p> <p>(b) The primary current in amps;</p> <p>(c) The secondary current in amps; and</p> <p>(d) The sparking rate, in sparks per minute. [s. NR 439.055(1)(c), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(4) The permittee shall monitor the pressure drop across the multi-cyclone in terms of inches of water. [s. NR</p>	<p>(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for noncondensable particulate matter, and EPA Method 202 to test for condensable particulate matter emissions. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code]</p> <p>(2) The permittee shall keep monthly records of:</p> <p>(a) The type of each fuel fired in each boiler; and</p> <p>(b) The amount of each fuel fired in each boiler. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(3) The permittee shall notify the Department when B09 or B11 fires a new alternate fuel at least six weeks prior to initially firing the fuel. As part of the notification, the permittee shall provide an analysis that shows the firing of the fuel meets the requirements of Condition O.1. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(4) The permittee shall record the multi-cyclone and ESP parameters once every eight hours whenever the boiler is operated. [s. NR 439.055(2)(b), Wis. Adm.</p>

**B. Stack S09, B09, C06 and C07**

192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.

**Stack S09, B11, C11 and C07** 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensable gases (NCG). Last modified in 1999. B09 is controlled by multiclone C11 (1974) and C07 in series.

439.055(1)(e), Wis. Adm. Code and Permit 99-SDD-109-R1]

(5) The permittee shall perform periodic inspections of the ESP by qualified personnel to ensure that the control equipment is operating properly. The time interval between inspections may not exceed twenty-six (26) months. Compliance tests may not be conducted within six (6) months of a periodic inspection. The periodic inspections shall include but not limited to the inspection, repair, maintenance and cleaning as necessary, of:

- (a) Electrode wires and bushings;
- (b) Inlet and outlet ducts for holes or other leakage;
- (c) Interior of the ESP;
- (d) Hammer shafts, motors and drive mechanisms;
- (e) Duct work between the boilers and the ESP.

[s. NR 407.09(4)(a)3.b., Wis. Adm. Code and Permit 99-SDD-109-R1]

(6) The permittee shall perform periodic inspections of the multi-cyclones to ensure that each control device is operating properly. The time interval between inspections may not exceed eighteen (18) months for C06 and twenty six (26) months for C11. The periodic inspections shall include but not be limited to inspections and repair or maintenance as necessary, of:

The cyclone tubes and side walls of hopper area for erosion;

The gaskets on the clean side tube sheet and high temperature gaskets;

The axial inlet spinner vanes for erosion; and

The solid discharge valve for erosion.

[s. NR 407.09(4)(a), Wis. Adm. Code and Permit 99-SDD-109-R1]

(7) The permittee shall perform an inspection of the multi-cyclones' hoppers for pluggage and unplug if necessary at least once per shift while the boilers are operating. [s. NR 439.055(5), Wis. Adm. Code and Permit 99-SDD-109-R1]

(8) While operating B09, the by-pass stack shall be used no more than 8 hours at a time, following the occurrence of a boiler warm-up after a cold shut-down, and no more

Code and Permit 99-SDD-109-R1]

(5) The permittee shall keep records of:

- (a) The date and initials of the person(s) performing the internal inspections of the control equipment;
- (b) A list of the items inspected; and
- (c) Any maintenance or repairs performed as a result of these inspections.

[s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]

(6) The permittee shall keep the following:

- (a) a log indicating that the multi-cyclones' hoppers were inspected at least once per shift while the boilers were operating;
- (b) records of any maintenance or repairs performed as a result of the hopper inspections; and
- (c) the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]

(7) When the bypass stack is used, the permittee shall keep records of:

- (a) the type of fuel used;
- (b) the amount of fuel used;
- (c) the hours of operation;
- (d) the number of continuous days used;
- (e) the number of days each calendar year used; and
- (f) which by-pass stack was used.

[s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]

(8) At least once every twenty-seven months, within 30 days of the inspection of the ESP and duct work, the permittee shall submit a report to the Department that contains the findings, conclusions, recommendations and qualifications of the inspector(s).

[s. NR 407.09(4)(a), Wis. Adm. Code]

(9) The permittee shall keep daily records of the operation of each transformer-rectifier (TR) set in the ESP. The records shall indicate the time and

<p><b>B. Stack S09, B09, C06 and C07</b>  192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.  <b>Stack S09, B11, C11 and C07</b> 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensable gases (NCG). Last modified in 1999. B09 is controlled by multiclone C11 (1974) and C07 in series.</p>	
<p>than 20 times in any calendar year. B09 by-pass stack may also be used for up to 7 continuous days per year during the annual ESP maintenance outage. B09 by-pass stack may be used without restriction when firing 100% natural gas. [s. NR 407.09(1)(a), Wis. Adm. Code and s. 285.65(7), Wis. Stats. and Permit 99-SDD-109-R1]</p> <p>(9) While operating B11, the by-pass stack shall be used no more than 8 hours at a time, following the occurrence of a boiler warm-up after a cold shut-down, and no more than 15 times in any calendar year. B11 by-pass stack may also be used for up to 7 continuous days per year during the annual ESP maintenance outage. B11 by-pass stack may be used without restriction when firing 100% natural gas. [s. NR 407.09(1)(a), Wis. Adm. Code and s. 285.65(7), Wis. Stats. and Permit 99-SDD-109-R1]</p> <p>(10) <u>Compliance Assurance Monitoring (CAM)</u>: These boilers are pollutant-specific emissions units subject to the CAM requirements of Part 64 CFR. The CAM monitoring requirements are fulfilled by complying with condition B.2. [s. 285.65(13), Wis. Stats., and 40 CFR Part 64.6(c)]</p>	<p>duration when any TR set is not operating while the ESP is in operation. [s. NR 407.09(4)(a), Wis. Adm. Code]</p>
<p><b>2. Pollutant: Visible Emissions</b></p>	
<p><b>a. Limitation:</b> 20% Opacity  [s. NR 431.04(2), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) The permittee shall install, calibrate, maintain and operate a continuous opacity monitor (COM) system for the measurement of opacity in accordance with the performance specifications in 40 CFR part 60, Appendix B, and the requirements in ss. NR 439.09 and 439.095. The permittee shall submit a quality control and quality assurance plan for approval by the Department. The monitor shall follow the QA/QC plan, as approved by the department. [ss. NR 439.095(5)(a)1. and NR 439.095(6), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>	<p>(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9 [s. NR 439.06(9)(a)1., Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(2) The permittee shall report quarterly excess emissions in accordance with condition O.3.b(3). [s. NR 439.09(10), Wis. Adm. Code]</p>
<p><b>3. Pollutant: Sulfur Dioxide</b></p>	
<p><b>a. Limitation:</b></p>	

<p><b>B. Stack S09, B09, C06 and C07</b>  192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.</p> <p><b>Stack S09, B11, C11 and C07</b> 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensable gases (NCG). Last modified in 1999. B09 is controlled by multiclone C11 (1974) and C07 in series.</p> <p>(1) 7 pounds per million BTU averaged over 24 hours and 5.5 pounds per million BTU averaged over 30 days for each boiler. [s. NR 417.07(2)(b), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) Combined emissions from B09 and B11 shall not exceed 3865.4 pounds per hour averaged over any 24 hour period. [s. NR 417.07(5)(b), Wis. Adm. Code and Permit 99-SDD-109-R1]  (3) The sulfur content of the no. 6 fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code and Permit 99-SDD-109-R1]  (4) The sulfur content of the coal blend may not exceed 4.4 percent by weight. A coal blend is any proportion of coal and petroleum coke. [s. NR 417.07(5), Wis. Adm. Code and Permit 99-SDD-109-R1-OP]  (5) Combined emissions from B09 and B11 shall not exceed 1.7 pounds per million BTU, notwithstanding condition B.3.a(1), if the stack height is between 175 and 290 feet. [s. NR 417.07(5)(b), Wis. Adm. Code and Permit 86-SJK-072]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) The permittee shall calibrate and maintain a sulfur dioxide continuous emission monitor (CEM). [s. NR 417.07(7)(a)1., Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) The permittee shall comply with all provisions and requirements as described in Performance Specification 2, 40 CFR Part 60, Appendix B for the CEM system. [s. NR 439.09(2), Wis. Adm. Code and Permit 99-SDD-109-R1]  (3) The permittee is exempt from fuel sampling for sulfur content as long as operation of the sulfur dioxide CEM continues to meet the performance specification requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.085(1)(c), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, the permittee shall use US EPA Method 6, 6A, 6B or 6C. [s. NR 439.06(2)(a), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour and pounds per million BTU. The average hourly boiler sulfur dioxide emissions shall be calculated for each boiler as shown in the QA/QC plan approved by the department. [ss. NR 439.04(1)(d) and NR 439.04(2), Wis. Adm. Code and Permit 99-SDD-109-R1]  (3) The permittee shall report quarterly excess emissions in accordance with condition O.3.b(3). [s. NR 439.09(10), Wis. Adm. Code]</p>
<p><b>4. Pollutant: * NR 445 Table 3 Hazardous Air Pollutant Emissions (nickel, arsenic, formaldehyde)</b></p>	
<p><b>a. Limitations:</b></p> <p>(1) * The permittee shall control emissions with Best Available Control Technology (BACT) for nickel and arsenic. BACT shall consist of Current Operating Practices, defined as the following:  (a) Maintain the temperature above 1700 °F, 25 feet above the grate at the centerline of each boiler,  (b) Provide a 0.5 second residence time at a temperature above 1700 °F,  (c) Operate C06, C11 and C07 whenever the boilers operate.  BACT does not apply during periods of boiler startup, shutdown or malfunction. [s. NR 445.07(1)(c), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) * Control emissions of formaldehyde with BACT. BACT shall consist of Current Operating Practices defined under condition B.4.a.(1)(a) to (c). [s. NR *445.07(1)(c), Wis. Adm. Code]</p>	



<p><b>B. Stack S09, B09, C06 and C07</b>  192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.  <b>Stack S09, B11, C11 and C07</b> 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensable gases (NCG). Last modified in 1999. B09 is controlled by multiclone C11 (1974) and C07 in series.</p>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
<p>(1) * The permittee shall demonstrate compliance with condition B.4.a.(1)(a) to (c) through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(2) * The permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>	<p>(1) * The permittee shall maintain documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(2) * The permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. Records shall note the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>
<b>5. Pollutant: Total Reduced Sulfur</b>	
<p><b>a. Limitation:</b>  (1) Emissions from use of NCG shall not exceed 6645 pounds of SO<sub>2</sub> per month on a 12 month rolling average. [s. NR 417.07(5), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) The furnace temperature shall be at least 1200 °F and retention time at least 0.5 seconds [ss. NR 405.02, and 417.06(2), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
<p>(1) NCGs shall be routed to either the lime kiln (P12) or No. 11 power boiler (B11) at all times the NCG system is in operation in order to reduce the emissions of TRS. [s. NR 417.06(2), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>	<p>(1) Whenever compliance emission testing is required for Total Reduced Sulfur Emissions, the permittee shall use US EPA Method 15A, 16, 16A, or 16B. [s. NR 439.06(7)(a), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(2) The permittee shall record pulp production rate in terms of air-dry tons of pulp (ADTP) per hour whenever NCGs are burned. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(3) The permittee shall use the average pulp rate (air-dry tons/hr) while NCG is burned along with the emission factor of 5.56 lb/ton of air-dry pulp to determine SO<sub>2</sub> emission from combustion of NCG after connecting condensate tanks T83 and T84 to the LVHC system. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p> <p>(4) The permittee shall record the NCG combustion start and end times. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>
<b>6. Pollutant: Alternate Fuel Use Emissions</b>	
<p><b>a. Limitation:</b>  (1) Tire-derived fuel (TDF) may not supply more than 8.5% of the heat input to the boiler. [s. NR 415.06(1)(b),</p>	

<p><b>B. Stack S09, B09, C06 and C07</b>  192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.  <b>Stack S09, B11, C11 and C07</b> 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensable gases (NCG). Last modified in 1999. B09 is controlled by multiclone C11 (1974) and C07 in series.</p>	
<p>Wis. Adm. Code and Permit 99-SDD-109-R1.]  (2) Petroleum coke may not be burned in a boiler in greater than the percentage of heat input supplied by petroleum coke that demonstrated compliance with applicable emission limitations.  [s. NR 415.06(1)(b), Wis. Adm. Code and Permit 99-SDD-109-R1.]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) When requested by the Department, the permittee shall sample and analyze fuels, other than coal and residual fuel oil, in a manner specified by the Department. [s. NR 439.085(4), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) The permittee shall calculate the percentage heat input supplied to each boiler from TDF (or other alternate fuel) using the following calculation:</p> $P = \frac{\sum_{i=1}^n HC_i * Q_i}{E \sum_{i=1}^n (HC_i * Q_i)} * 100$ <p>where:  <b>P</b> is the daily average percentage (of heat input supplied to the boiler) of TDF;  <b>HC<sub>i</sub></b> is the heat content of the TDF used during the day (expressed in BTU per pound);  <b>Q<sub>i</sub></b> is the amount of TDF used (expressed in pounds) during the day;  <b>n</b> is the number of fuels fired in the boiler during the day;  <b>I</b> represents each fuel fired during the day;  <b>HC<sub>i</sub></b> is the heat content of each individual fuel fired; and  <b>Q<sub>i</sub></b> is the amount of each individual fuel fired during the day. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]  (3) Notwithstanding condition B.6.b (2), in any month that combustion of a fuel mix containing TDF does not exceed the average stack opacity measured in the last successful stack test conducted per condition B.1 c (1) which burned TDF, monthly values may be used to define all variables described in condition B.6.b (2). [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]  (4) Within 90 days of issuance of this permit the permittee shall perform a stack test while burning petroleum coke in B11, using methods specified in condition B.1 c (1). [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]</p>	<p>(1) Whenever an alternate fuel listed in condition B.6. other than petroleum coke is burned, the permittee shall keep the following records for each fuel co-fired:  (d) The daily amount of each fuel consumed, amount (expressed in pounds for solid fuels, thousand gallons for liquid fuels, and million cubic feet for gaseous fuels),  (e) The heat content of each fuel (expressed in BTU per pound for solid fuels, BTU per thousand gallons for liquid fuels, and BTU per million cubic feet for gaseous fuels),  (f) The daily average percentage of heat input (P) that was supplied to the boiler from TDF for each day of the month (P, expressed in percentage heat input to the boiler).  [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) Notwithstanding condition B.6.c (2), in any month that condition B.6. b (3) is used, records shall be kept of the monthly amounts of alternate fuel consumed and a monthly average percentage of each alternate fuel's heat input.  [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]  (3) The permittee shall sample fuels using methods and procedures approved, in writing, by the department. [s. 439.08(3), Wis. Adm. Code.]  (4) The permittee shall keep records of fuel sampling and make it available to the Department upon request. [s. 439.04(1)(d), Wis. Adm. Code and Permit 99-SDD-109-R1]</p>

<b>C. S81 B81</b> 96.7 million BTU per hour, 75,000 lb/hr steam at 350 psig, natural gas-fired package boiler. First operated in 1999. <sup>2</sup>	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>a. Limitation:</b> <sup>3</sup>	
(1) 0.02 pounds per mmBTU, and 0.73 pounds per hour. [s. NR 415.06(2)(a), Wis. Adm. Code, s. 285.65(7), Wis. Stats and Permit 95-POY-098.]	
(2) The operational hours may not exceed 200 hours per month averaged over any 12 consecutive months. [s. NR 405.02(27), Wis. Adm. Code, s. 285.65(7), Wis. Stats and Permit 95-POY-098.]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee shall only use a package boiler with a heat input capacity that does not exceed 96.7 mmBTU per hour. [s. 407.09(4)(a), Wis. Adm. Code]	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for noncondensable particulate matter, and EPA Method 202 to test for condensable particulate matter emissions. [s NR 439.06(1), Wis. Adm. Code and Permit 95-POY-098]
(2) The permittee shall only burn natural gas in the package boiler. [s. 285.65(3), Wis. Stats. and Permit 95-POY-098]	(2) The permittee shall keep monthly records of: (a) hours of operation, (b) amount of natural gas used, and (c) Average hours of operation per month, averaged over the previous 12 consecutive months. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 95-POY-098]
<b>2. Pollutant: Visible Emissions</b>	
<b>a. Limitation:</b> 20% Opacity [s. NR 431.05, Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) See Particulate Matter Emission Compliance Demonstration sections listed for this source.	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

<sup>2</sup> This is a portable rental unit that is rarely onsite.

<sup>3</sup> The applicable limitation is 0.15 pounds per mmBTU (s. NR 415.06(2)(a), Wis. Adm. Code). However, the permittee requested a more stringent limit on September 25, 1995 to avoid PSD applicability.

<p><b>D. B08 S08 and S10 C03 and C04</b> 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.</p> <p><b>B10 S08 and S10 C03 and C04</b> 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.</p>	
<p><b>1. Pollutant: Particulate Matter Emissions</b></p>	
<p><b>a. Limitation:</b></p> <ol style="list-style-type: none"> <li>(1) 0.30 pounds per million BTU heat input from Boilers B08 and B10. [s. NR 415.06(1)(b), Wis. Adm. Code and Permit 86-SJK-072]</li> <li>(2) Emit total particulate matter in an amount less than or equal to 49.5 pounds per hour from Boilers B08 and B10. [ss. NR 415.06(1)(b) and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]</li> <li>(3) 0.287 pound per million BTU heat input on a 30-day average when the by-pass stack is in operation. [s. 285.64, Wis. Stats. and Permit 86-SJK-072A]</li> <li>(4) The permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from both recovery boilers is less than or equal to 0.036 grains of PM per dry standard cubic foot (gr/dscf) corrected to 8 percent oxygen, unless provided otherwise under condition O.8.a. [40 CFR §63.862 (a)(1)(ii) and s. 285.65(13), Wis. Stats.]</li> <li>(5) In boiler B08, only burn Kraft liquor, No. 6 fuel oil, natural gas and fuels allowed under conditions O.1. [s. 285.65(3) Wis. Stats and Permit 86-SJK-072]</li> <li>(6) In boiler B10, only burn Kraft liquor, natural gas and fuels allowed under conditions O.1. [s. 285.65(3) Wis. Stats and Permit 86-SJK-072]</li> </ol>	
<p><b>b. Compliance Demonstration</b></p> <ol style="list-style-type: none"> <li>(1) The permittee shall operate electrostatic precipitators C03 and C04 at all times B08 and B10 are in operation. [s. 285.65(3) Wis. Stats. and Permit 86-SJK-072-R1]</li> <li>(2) The permittee shall operate an electrostatic precipitator control device to control particulate matter emissions whenever either boiler is in operation with the exception of periods of normal start-up and shut-down as defined in the start-up and shut-down and precipitator procedures. [s. NR 407.09(1)(a), Wis. Adm. Code and s. 285.63(1)(a), Wis. Stats.]</li> <li>(3) The permittee shall perform compliance emission testing for particulate matter every 24 months, as specified under condition O.2.a (1). [s. NR 439.075(2)(a)1, Wis. Adm. Code]</li> <li>(4) The permittee shall monitor the following parameters for each electrostatic precipitator: <ol style="list-style-type: none"> <li>(a) The primary voltage in volts;</li> <li>(b) The secondary current in amps; and</li> <li>(c) The sparking rate, in sparks per minute. [s. NR 439.055(1)(c), Wis. Adm. Code]</li> </ol> </li> <li>(5) The permittee shall perform periodic inspections of the</li> </ol>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <ol style="list-style-type: none"> <li>(1) Whenever particulate matter emission testing is required the permittee shall measure and report emissions using all of the following procedures: <ol style="list-style-type: none"> <li>(a) EPA Methods 5 and 202. Results shall be used to verify compliance with the limitations of conditions D.1.a (1), (2) and (3). [s NR 439.06(1), Wis. Adm. Code]</li> <li>(b) EPA Method 5 as specified under condition O.8.b. (1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. Results shall be used to verify compliance with the applicable limitations of conditions D.1.a (4) and D.6.a. [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.]</li> </ol> </li> <li>(2) The permittee shall keep monthly records of: <ol style="list-style-type: none"> <li>(a) The type of each fuel fired in the boiler; and</li> <li>(b) The amount of each fuel fired in the boiler; and</li> <li>(c) the units for the amount of fuel fired. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 86-SJK-072A]</li> </ol> </li> <li>(3) The permittee shall record the ESP parameters</li> </ol>

<p><b>D. B08 S08 and S10 C03 and C04</b> 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.</p> <p><b>B10 S08 and S10 C03 and C04</b> 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.</p>	
<p>ESP by qualified personnel to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to the inspection, repair, maintenance and cleaning as necessary, of:</p> <p>(a) Electrode wires and bushings;</p> <p>(b) Inlet and outlet ducts for holes or other leakage;</p> <p>(c) Interior of the ESP. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]</p> <p>(6) The permittee shall evaluate the rapper settings for the ESP no less than semi-annually and make adjustments to the frequency and intensity if necessary.[s. NR 407.09(4)(a)3.b., Wis. Adm. Code]</p> <p>(7) The ESP by-pass stack may not vent emissions from either B08 or B10 to the atmosphere unless those emissions originate from either natural gas or residual fuel oil combustion. [s. NR 407.09(4)(a), Wis. Adm. Code and s. 285.63(1)(a), Wis. Stats. and Permit 86-SJK-072A]</p> <p>(8) <u>Compliance Assurance Monitoring (CAM)</u>: These boilers are pollutant-specific emissions units subject to the CAM requirements of Part 64 CFR. The CAM monitoring requirements are fulfilled by complying with conditions D.6 and O.8. [s. 285.65(13), Wis. Stats., and 40 CFR Part 64.6(c)]</p>	<p>once every eight hours whenever the boilers are operated. [s. NR 439.055(2)(b), Wis. Adm. Code]</p> <p>(4) The permittee shall keep records of:</p> <p>(a) The date and initials of the person(s) performing the internal inspections of the ESP;</p> <p>(b) A list of the items inspected; and</p> <p>(c) Any maintenance or repairs performed as a result of these inspections.</p> <p>(d) The findings, conclusions, recommendations and qualifications of the inspector(s). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(5) The permittee shall keep records of:</p> <p>(a) The date of the rapper setting evaluations; and</p> <p>(b) The results of the rapper evaluations. [s. NR 409.04(a)3.b., Wis. Adm. Code]</p> <p>(6) The permittee shall keep records of:</p> <p>(a) The date(s) the by-pass stack was used; and</p> <p>(b) The reason(s) emissions were routed through the by-pass stack. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(7) At least once every eighteen months, within 30 days of the inspection of the ESP and duct work, the permittee shall submit a report to the Department that contains the findings, conclusions, recommendations and qualifications of the inspector(s). [s. NR 407.09(4)(a), Wis. Adm. Code]</p> <p>(8) The permittee shall keep daily records of the operation of each transformer-rectifier (TR) set in the ESPs. The records shall indicate the time and duration when any TR set is not operating and the ESP is in operation. [s. NR 407.09(4)(a), Wis. Adm. Code]</p>
<p><b>2. Pollutant: Visible Emissions</b></p>	
<p><b>a. Limitation:</b> 20% Opacity [s. NR 431.04(2), Wis. Adm. Code and Permit 86-SJK-072]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>

<p><b>D. B08 S08 and S10 C03 and C04</b> 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.</p> <p><b>B10 S08 and S10 C03 and C04</b> 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.</p>	
(1) See conditions D.6.b. (1) and D.6.c. (1) and (2).	<p>(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(2) The permittee shall report quarterly excess emissions in accordance with condition O.3.b(3). [s. NR 439.09(10), Wis. Adm. Code]</p>
<p><b>3. Pollutant: Sulfur Dioxide</b></p>	
<p><b>a. Limitation:</b></p> <p>(1) 466.3 pounds per hour averaged over any consecutive 24-hour period from B08 and B10 in combination. [s. NR 417.07(5), Wis. Adm. Code and Permit 86-SJK-072]</p> <p>(2) The sulfur content of the no. 6 fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code and Permit 86-SJK-072]</p>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
<p>(1) The permittee shall perform compliance emission testing for sulfur dioxide every 24 months, as specified under condition O.2.a (1). [s. NR 439.075(2)(a)2, Wis. Adm. Code]</p> <p>(2) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour. The average hourly sulfur dioxide emissions shall be calculated for both boilers by dividing total sulfur dioxide emissions for each day by the hours of boiler operation for that day. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code]</p>	<p>(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, US EPA Method 6, 6A, 6B or 6C shall be used to demonstrate compliance. [s. NR 439.06(2)(a), Wis. Adm. Code]</p> <p>(2) See testing, reporting, and recordkeeping requirements for residual oil in Condition O.5. [s. NR 417.07(7)(a)4., Wis. Adm. Code]</p>
<p><b>4. Pollutant: *NR 445 Table 3 Hazardous Air Pollutant Emissions</b></p>	
<p><b>a. *Limitation:</b></p> <p>(1) LAER * - current operating practices and the operation of the control equipment whenever the boiler is in operation. (arsenic) [s. NR 445.07, Wis. Adm. Code]</p> <p>(2) BACT * - current operating practices and the operation of the control equipment whenever the boiler is in operation. <sup>4</sup> (nickel, POM, formaldehyde, and benzene)[s. NR 445.07, Wis. Adm. Code]</p>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>

<sup>4</sup> Control equipment which can be utilized by a facility to control HAP emissions include: ESPs, cyclones, and baghouses for particulate based HAPs; adsorbers (such as activated carbon), absorbers (such as wet scrubbers and spray towers), and incinerators for VOC based HAPs. It was found that this boiler operates under the conditions consistent with high temperature incinerators.

<p><b>D. B08 S08 and S10 C03 and C04</b> 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.</p> <p><b>B10 S08 and S10 C03 and C04</b> 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.</p>	
<p>(1) * The permittee shall demonstrate compliance with the Hazardous Air Pollutant limitation through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code]</p> <p>(2) * The permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code]</p>	<p>(1) * The permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(2) * The permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. The permittee shall note the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(3) * The permittee shall use methods and plans approved, in writing, by the Department for compliance emission testing of HAP emissions. [ss. NR 407.09(1)(c)1.b. and 439.06(8), Wis. Adm. Code]</p>
<p><b>5. Pollutant: Total Reduced Sulfur</b></p>	
<p><b>a. Limitation:</b> 0.5 pounds of TRS (as sulfur) per equivalent ton of air-dried kraft pulp or 17.5 parts per million dry volume (as hydrogen sulfide), whichever is more restrictive [s. NR 417.06(1), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) The permittee shall perform compliance emission testing for total reduced sulfur every 24 months, as specified under Condition O.2.a (1). [s. NR 439.075(2)(a)3, Wis. Adm. Code]</p>	<p>(1) Whenever compliance emission testing is required for Total Reduced Sulfur Emissions, the permittee shall use US EPA Method 15A, 16, 16A, or 16B [s. NR 439.06(7)(a), Wis. Adm. Code]</p>
<p><b>6. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills</b></p>	
<p><b>a. Limitation:</b></p> <p>(1) The permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from both recovery boilers is less than or equal to 0.036 grains of PM per dry standard cubic foot (gr/dscf) corrected to 8 percent oxygen, unless provided otherwise under condition O.8.a. [40 CFR §63.862 (a)(1)(ii) and s. 285.65(13), Wis. Stats.]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) See requirements under condition O.8. [s. 285.65(13), Wis. Stats.]</p>	<p>(1) On each stack that exhausts a recovery boiler and is equipped with an ESP, the permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS). As specified in 40 CFR §63.8 (c)(4)(i), each</p>

<p><b>D. B08 S08 and S10 C03 and C04</b> 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.</p> <p><b>B10 S08 and S10 C03 and C04</b> 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.</p>	
	<p>COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. The COMS data must be reduced as specified in 40 CFR §§63.8(g)(2).</p> <p>[40 CFR §63.864 (d) and s. 285.65(13), Wis. Stats.]</p> <p>(2) See additional requirements in Table O.8.</p> <p>[s. 285.65(13), Wis. Stats.]</p>

<p><b>E. Stack S05 P08 C05</b> The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).</p> <p><b>Stack S06 P10 C10</b> The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975). These conditions apply to each process individually unless otherwise indicated.</p>	
<p><b>1. Pollutant: Particulate Matter Emissions</b></p>	
<p><b>a. Limitations:</b></p> <p>(1) Emit total particulate matter in an amount less than or equal to 4.46 pounds per hour for P08. [ss. NR 415.05(1)(o) and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]</p> <p>(2) Emit total particulate matter in an amount less than or equal to 5.66 pounds per hour for P10. [ss. NR 415.05(1)(o) and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) The permittee shall operate the scrubber at all times the process is in operation except during times of routine purging or emergency. [s. NR 407.09(4)(a), Wis. Adm. Code]</p> <p>(2) During times of routine purging or emergency, the permittee may not utilize the scrubber by-pass for more than</p> <p>(a) 38 hours per month and</p> <p>(b) 8 consecutive hours.</p> <p>If it takes longer to correct the equipment malfunction, the permittee shall remove the black liquor spray from the boiler and burn down the bed. [s. NR 407.09(4)(a), Wis. Adm. Code]</p> <p>(3) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly, as well as perform maintenance and repairs as necessary. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of:</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) Whenever particulate matter emission testing is required the permittee shall measure and report emissions using all of the following procedures:</p> <p>(a) EPA Methods 5 and 202. Results shall be used to verify compliance with the limitation of condition E.1.a. [s NR 439.06(1), Wis. Adm. Code]</p> <p>(b) EPA Method 5 as specified under condition O.8.b. (1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. Results shall be used to verify compliance with the applicable limitations of condition E.4.a. [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.]</p> <p>(2) The permittee shall keep records of when the scrubber by-pass was utilized which include the number of hours per month and the reason for use. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(3) The permittee shall keep records of:</p> <p>(a) The date and initials of the person performing the</p>



<p><b>E. Stack S05 P08 C05</b> The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).</p> <p><b>Stack S06 P10 C10</b> The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975). These conditions apply to each process individually unless otherwise indicated.</p>	
<p>(a) spray nozzle for signs of corrosion and build up; (b) Inlet and outlet ducts for clogging and for holes or other leakage; (c) Pumping system including the suction pipe, and pumping system valves; and (d) Mist eliminator (umbrella) for signs of corrosion and build up. [s. NR 407.09(4)(a), Wis. Adm. Code] (4) Follow monitoring requirements for wet scrubbers C05 and C10 listed in condition E.4.b and c. (5) <u>Compliance Assurance Monitoring (CAM)</u>: The smelt dissolving tanks are pollutant-specific emissions units subject to the CAM requirements of Part 64 CFR. The CAM monitoring requirements are fulfilled by complying with condition E.4.b. and c. [s. 285.65(13), Wis. Stats., and 40 CFR Part 64.6(c)]</p>	<p>inspections of the scrubber; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p><b>2. Pollutant: Visible Emissions</b></p>	
<p><b>a. Limitation:</b> 20% Opacity [s. NR 431.04(2), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) See Particulate Matter Emission Compliance Demonstration section listed for this source.</p>	<p>(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) See Conditions E.1.b. and c. for particulate matter emissions.</p>
<p><b>3. Pollutant: *NR 445 Hazardous Air Pollutant Emissions (formaldehyde)</b></p>	
<p><b>Limitation:</b> (1) *Control emissions of formaldehyde and benzene with Best Available Control Technology (BACT). BACT is defined as the use of current scrubbing control equipment. Weak wash, raw water, or equivalent scrubbing medium shall be used at all times the scrubber is in operation except during times of routine purging or emergency. [s. NR *445.07(1)(c), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) See Particulate Matter Emission Compliance Demonstration section listed for this source.</p>	<p>(1) The permittee shall keep records of times of routine purging and emergency when scrubbing medium is not used in the process. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<p><b>E. Stack S05 P08 C05</b> The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).</p> <p><b>Stack S06 P10 C10</b> The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975). These conditions apply to each process individually unless otherwise indicated.</p>	
<p><b>4. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills</b> (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, selenium; mercury)</p>	
<p><b>a. Limitation:</b></p> <p>(1) The permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from both smelt dissolving tanks is less than or equal to 0.246 pounds of PM per dry ton of black liquor solids fired, unless provided otherwise under Condition O.8.a. [40 CFR §63.862 (a) (1)(ii) and s. 285.65(13), Wis. Stats.]</p>	
<p><b>b. Compliance Demonstration</b></p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p>
<p>(1) The permittee shall maintain the 3-hour average pressure drop across each scrubber at no less than 4.9 inches of water, unless the exceedance is excused or an alternate range is approved under the conditions in Table O.8.a. [40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p> <p>(2) The permittee shall maintain a 3-hour average scrubbing liquid flow rate to wet scrubber C05 of no less than 30 gallons per minute, unless the exceedance is excused or an alternate range is approved under condition O.8.a. [40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p> <p>(3) The permittee shall maintain a 3-hour average scrubbing liquid flow rate to wet scrubber C10 of no less than 35 gallons per minute, unless the exceedance is excused or an alternate range is approved under condition O.8.a. [40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p>	<p>(1) On each stack that exhausts a smelt dissolving tank and is equipped with a wet scrubber, the permittee must install, calibrate, maintain, and operate a continuous parameter monitoring system (CPMS) to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate using the procedures in 40 CFR §63.8(c), and the following procedures:</p> <p>(a) The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gage pressure of <math>\pm 2</math> inches of water gage pressure;</p> <p>(b) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within <math>\pm 5</math> percent of the design scrubbing liquid flow rate. [40 CFR §63.864 (e) and s. 285.65(13), Wis. Stats.]</p> <p>(2) See additional requirements in condition O.8. [s. 285.65(13), Wis. Stats.]</p>

<b>F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.</b>	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>a. Limitation:</b> (1) Emit particulate matter in an amount less than or equal to the following: (a) 0.067 grain/dscf corrected to 10% oxygen when gaseous fossil fuel is burned, (b) 0.13 grain/dscf corrected to 10% oxygen when liquid fossil fuel is burned. Note: these NSPS limits are based on measurements of front-half PM only. [s. NR 440.45(3)(a)3., Wis. Adm. Code and Permit 86-SJK-024A] (2) Emit total particulate matter in an amount less than or equal to 13.8 pounds per hour. [ss. NR 415.05(2) and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]	
<b>b. Compliance Demonstration</b>  (1) The facility shall install, calibrate, maintain and operate a device for measuring the mass rate of lime mud to the kiln. The measuring device shall be accurate within plus or minus 5% of the mass rate over its operating range. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]  (2) The facility shall operate process P12 as follows unless authorized otherwise, in writing, by the department: (a) burn only natural gas or residual fuel oil as fuel, (b) operate C13 at all times P12 is in operation. [Permit 86-SJK-024A, s. NR 407.09(4)(a)3.b., Wis. Adm. Code]  (3) At all times, including periods of startup, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate C13 and P12 in a manner consistent with good air pollution control practice for minimizing emissions. [s. NR 440.11(4) Wis. Adm. Code]  (4) The permittee shall perform compliance emission testing for particulate matter every 24 months, as specified under Condition O.2.a.(1). [s. NR 439.075(2)(a)1, Wis. Adm. Code]  (5) The permittee shall follow monitoring requirements for wet scrubber C13 listed in conditions F.7.b and c. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code]  (6) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of:	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>  (1) Whenever particulate matter emission testing is required, the permittee shall measure and report emissions using the following procedures in the order listed: (a) EPA Method 5 as modified by s. NR 440.45(6), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. Results shall be used to verify compliance with the applicable limitations of condition F.1.a. (1). [ss. NR 440.45(6), Wis. Adm. Code] (b) EPA Method 5 as specified under condition O.8.b. (1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. Results shall be used to verify compliance with the applicable limitations of condition F.7.a. [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.] (c) EPA Methods 5 and 202 with acetone used as the cleanup solvent after the water rinses in the front half sample recovery procedure. Results shall be used to verify compliance with the limitation of condition F.1.a.(2). [s. NR 439.06(1), Wis. Adm. Code]  (2) The permittee shall maintain a daily record of the amount of each fuel burned per hour of source operation. [40 CFR §63.862 (a) (1)(ii) and s. 285.65(13), Wis. Stats. and s. NR 439.04(1)(d), Wis. Adm. Code]  (3) The permittee shall keep records of: (a) The date of each inspection of the wet scrubber, (b) A list of the items inspected, and (c) Any maintenance or repairs performed as a result of these inspections.

<b>F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur.</b> Last modified in 1986.	
(a) spray nozzle for signs of corrosion and build up; (b) Inlet and outlet ducts for clogging and for holes or other leakage; (c) Pumping system including the suction pipe and pumping system valves; and (d) Mist eliminator for signs of corrosion and build up [s. NR 407.09(4)(a), Wis. Adm. Code]  (7) <u>Compliance Assurance Monitoring (CAM)</u> : The lime kiln is a pollutant-specific emissions unit subject to the CAM requirements of Part 64 CFR. The CAM monitoring requirements are fulfilled by complying with condition F.7.b. and c. [s. 285.65(13), Wis. Stats., and 40 CFR Part 64.6(c)]	[s. NR 439.04(1)(d), Wis. Adm. Code]
<b>2. Pollutant: Visible Emissions</b>	
<b>a. Limitation:</b>	
(1) 20% Opacity [s. NR 431.05, Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) See Particulate Matter Emission, Compliance Demonstration section listed for this source.	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9 [s. NR 439.06(9)(a)1., Wis. Adm. Code]  (2) See recordkeeping and monitoring requirements for particulate matter emissions.
<b>3. Pollutant: Sulfur Dioxide</b>	
<b>a. Limitation:</b>	
(1) 8.71 pounds per hour averaged over any 24 hour period. [Permit 86-SJK-024A and s. 285.65(7), Wis. Stats.] <sup>5</sup>	
(2) The sulfur content of the No. 6 fuel oil shall not exceed 2.7 percent by weight. [ss. 285.65(7), Wis. Stats.]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour. The average hourly sulfur dioxide emissions shall be calculated by dividing total sulfur dioxide emissions for each day by the hours of operation for that day. These records shall be kept available for inspection by Department upon request. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, US EPA Method 6, 6A, 6B, 6C or a calibrated sulfur dioxide continuous emission monitor. [s. NR 439.06(2)(a), Wis. Adm. Code] (2) See testing, reporting, and recordkeeping requirements for residual oil in Condition O.5. [s. NR 417.07(7)(a)4., Wis. Adm. Code]

<sup>5</sup> These limitations are set to insure that the emissions increase from the 1986 lime kiln project remain below 40 tons per year, and the federal prevention of significant deterioration requirements under chapter NR 405 do not apply.

<b>F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.</b>	
<b>4. Pollutant: Nitrogen Oxides</b>	
<b>a. Limitation:</b> (1) 1.58 pounds per ton lime produced, 8.90 pounds per hour, averaged over a daily-hour period. [Permit 86-SJK-024A and s. 285.65(7), Wis. Stats.] <sup>6</sup>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) Within 90 days of issuance of this permit, and every 4 years thereafter, the permittee shall perform a stack test for nitrogen oxides while burning the typical fuel mix. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) Whenever compliance emission testing is required for Nitrogen oxides, US EPA Method 7, 7A, 7B or 7C shall be used to demonstrate compliance. [s. NR 439.06(6)(a), Wis. Adm. Code]  (2) Using the emission factor from the most recent stack test, the permittee shall keep records of nitrogen oxide emissions, in pounds per hour averaged over a production day, lime produced per day and hours of operation. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]
<b>5. Pollutant: *NR 445 Table 3 Hazardous Air Pollutant Emissions (formaldehyde)</b>	
<b>a. * Limitation:</b> (1) LAER * - current operating practices and the operation of the control equipment whenever the lime kiln is in operation. (arsenic) [s. NR 445.05(3)(a), Wis. Adm. Code] (2) BACT * - current operating practices and the operation of the control equipment whenever the lime kiln is in operation. <sup>7</sup> (nickel, formaldehyde, and benzene) [s. NR *445.07(1)(c), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee shall demonstrate compliance with the Hazardous Air Pollutant limitation through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code]  (2) The permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code]	(1) The permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code]  (2) The permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. The permittee shall note the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code]

<sup>6</sup> These limitations are set to insure that the emissions increase from the 1986 lime kiln project remain below 40 tons per year, and the federal prevention of significant deterioration requirements under chapter NR 405 do not apply.

<sup>7</sup> Control equipment which can be utilized by a facility to control HAP emissions include: ESPs, cyclones, and baghouses for particulate based HAPs; adsorbers (such as activated carbon), absorbers (such as wet scrubbers and spray towers), and incinerators for VOC based HAPs. It was found that this process operates under the conditions consistent with high temperature incinerators.

<b>F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.</b>	
	(3) The permittee shall use methods and plans approved, in writing, by the Department for compliance emission testing of HAP emissions. [ss. NR 407.09(1)(c)1.b. and 439.06(8), Wis. Adm. Code]
<b>6. Pollutant: Total Reduced Sulfur (TRS)</b>	
<b>a. Limitation:</b> 8 parts per million by volume on a dry basis corrected to 10% oxygen, based on a 12-hour average. [s. NR 440.45(4)(a)5., Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
<p>(1) NCGs from the digester and multiple-effect evaporators shall be routed to either the lime kiln (P12) or no. 11 power boiler (B11) at all times the systems are in operation in order to reduce the emissions of TRS. The reduction of TRS emissions shall be equal to the reduction achieved by thermal oxidation. [ss. NR 407.09(4)(a), and 417.06(2), Wis. Adm. Code]</p> <p>(2) The permittee shall perform maintenance checks on the NCG system for signs of leakage and ensure the system is operating properly on a periodic basis according to facility operating procedures. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]</p> <p>(3) The permittee shall calibrate and maintain a continuous emission monitor (CEM) for TRS and oxygen discharge concentrations. [s. NR 440.45(5)(a)2., Wis. Adm. Code]</p> <p>(4) The permittee shall comply with all provisions and requirements as described in Performance Specification 5, 40 CFR Part 60, Appendix B for the CEM system. [s. NR 439.09(5), Wis. Adm. Code]</p>	<p>(1) Whenever compliance emission testing is required for TRS emissions, US EPA Method 15A, 16, 16A, or 16B shall be used to demonstrate compliance. [s. NR 439.06(7)(a), Wis. Adm. Code]</p> <p>(2) The permittee shall continuously monitor and record the concentration of TRS emissions and percent oxygen by volume on a dry basis in the gases discharged from the lime kiln. [s. NR 440.45(5)(a)2., Wis. Adm. Code]</p> <p>(3) The permittee shall calculate and record on a daily basis 12-hour average TRS and oxygen concentrations for the 2 consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous one-hour average TRS and oxygen concentrations provided by the CEM. Correct all 12-hour average TRS concentrations to 10 volume percent oxygen. [s. NR 440.45(5)(c), Wis. Adm. Code]</p> <p>(4) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the NCG system to the lime kiln and power boiler B11 [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(5) The permittee shall keep records of any maintenance or repairs performed as a result of the maintenance checks. The permittee shall note the date and initials of the person performing the</p>

<b>F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.</b>	
	<p>maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(6) The permittee shall report quarterly excess emissions in accordance with condition O.3.b(3). [s. NR 439.09(10), Wis. Adm. Code]</p>
<b>7. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills</b>	
<b>a. Limitation:</b> <p>(1) Whenever residual oil is burned in the lime kiln, and natural gas is burned in an amount less than or equal to a pilot flame, the permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from the lime kiln is less than or equal to 0.13 grains of PM per dry standard cubic foot (gr/dscf) corrected to 10 percent oxygen, unless provided otherwise under Condition O.8.a.</p> <p>(2) Whenever residual oil is burned in the lime kiln, and natural gas is burned in an amount greater than a pilot flame, the permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from the lime kiln is less than or equal to 0.067 grains of PM per dry standard cubic foot (gr/dscf) corrected to 10 percent oxygen, unless provided otherwise under Condition O.8.a.</p> <p>[40 CFR §63.862 (a) (1)(ii) and s. 285.65(13), Wis. Stats.]</p>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
<p>(1) The permittee shall operate wet scrubber C13 with 7 Ahlstrom nozzles and 4 Turbotak high-pressure air atomizing fine droplet nozzles, unless an alternate number or type of nozzle is approved under condition O.8.a.</p> <p>[40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p> <p>(2) The permittee shall maintain the following minimum 3-hour average parameters for scrubbing liquid used by the Ahlstrom nozzles, unless the exceedance is excused or an alternate range is approved under condition O.8:</p> <p>(a) Liquid pressure of 249 pounds per square inch,</p> <p>(b) Liquid flow rate of no less than 264 gallons per minute.</p> <p>[40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p> <p>(3) The permittee shall maintain the following minimum 3-hour average parameters for the Turbotak nozzles, unless the exceedance is excused or an alternate range is approved under condition O.8:</p> <p>(a) Air pressure of 90 pounds per square inch,</p> <p>(b) Liquid flow rate of no less than 40 gallons per minutes.</p> <p>[40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p>	<p>(1) On each stack that exhausts the lime kiln and is equipped with a wet scrubber, the permittee must install, calibrate, maintain, and operate a continuous parameter monitoring system to determine and record the liquid pressure to the Ahlstrom nozzles in the scrubber, the air pressure to the Turbotak nozzles, and the scrubbing liquid flow rate to both types of nozzles, using the procedures in 40 CFR §63.8(c), and the following procedures:</p> <p>(a) The monitoring device used for the continuous measurement of the liquid pressure of the scrubber fluid to the Ahlstrom nozzles must be certified by the manufacturer to be accurate to within a gage pressure of <math>\pm 5</math> percent of the meter design pressure;</p> <p>(b) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within <math>\pm 5</math> percent of the design scrubbing liquid flow rate.</p> <p>(c) The monitoring device used for continuous measurement of air pressure to the Turbotak nozzles must be certified by the manufacturer to be accurate within <math>\pm 5</math> percent of the design air pressure.</p> <p>[40 CFR §63.864 (e) and s. 285.65(13), Wis. Stats.]</p>

<b>F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.</b>	
	(2) See additional requirements under Table O.8. [s. 285.65(13), Wis. Stats.]



<b>G. Stack S19 P19 C20</b> Slaker and causticizing tanks. The emissions from the slaker and two causticizing tanks are controlled by a common water scrubber. Last modified in 1986.		
<b>1. Pollutant: Particulate Matter Emissions</b>		
<b>a. Limitation:</b> 0.34 pounds per hour [s NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]		
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>	
(1) The permittee shall operate the scrubber at all times the process is in operation except during times of routine purging or emergency. [s. NR 407.09(4)(a), Wis. Adm. Code]	(1) Whenever compliance emission testing is required for Particulate Matter Emissions, the permittee shall use US EPA Method 5, including condensable back half emissions using US EPA Method 202. [s. NR 439.06(1), Wis. Adm. Code]	
(2) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) spray nozzle for signs of corrosion and build up; (b) Inlet and outlet ducts for clogging and for holes or other leakage. [s. NR 407.09(4)(a), Wis. Adm. Code]	(2) The permittee shall inspect the scrubber once per shift while the process is in operation to verify there is water flow to the scrubber. [s. NR 439.04(1)(d), Wis. Adm. Code]	
	(3) The permittee shall keep records of: (a) The date and initials of the person performing the inspections of the scrubber; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code]	
<b>2. Pollutant: Visible Emissions</b>		
<b>a. Limitation:</b> 20% Opacity [s. NR 431.05, Wis. Adm. Code]		
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>	
(1) See Particulate Matter Emission Compliance Demonstration section listed for this source.	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code]	
	(2) See monitoring and recordkeeping requirements for particulate matter emissions.	
<b>3. Pollutant: *NR 445, Wis. Adm. Code Hazardous Air Pollutant Emissions (formaldehyde)</b>		
<b>Limitation Until June 30, 2007:</b> (1) Control emissions with Best Available Control Technology (BACT). BACT shall consist of Current Operating Practices, defined as the following: (a) * The permittee shall use fresh water on the slaker scrubber or use technology which has been demonstrated to be equivalent at reducing emissions from this source. [s. NR *445.07(1)(c), Wis. Adm. Code]		
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>	
(1) The permittee shall use fresh water on the slaker scrubber or use technology which has been demonstrated to be equivalent at reducing emissions from this source. [s. NR 407.09(4)(a), Wis. Adm. Code]	(1) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the fresh water pipes throughout the pulping operation system. [s. NR 439.04(1)(d), Wis. Adm. Code]	

<b>H. Stack S17 P17</b> Digester, multiple-effect evaporator, and turpentine noncondensable gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a back up. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.	
<b>4. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, Subpart S: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Pulp &amp; Paper Production at Kraft Pulp Mills</b> (gaseous organic HAPs, as methanol)	
<b>a. Limitations:</b> (1) The permittee shall control the total HAP emissions from each Low Volume, High Concentration (LVHC) noncondensable gas (NCG) system, as follows: (a) Enclose the source, vent the LVHC NCG into a closed-vent system and convey the NCG collected to a control device. [s. NR 464.03(3), Wis. Adm. Code] (b) LVHC NCG shall be introduced into the primary fuel or into the flame zone of the lime kiln, process P12; or introduced into boiler B11 with the combustion air. [s. NR 464.03(4)(c), Wis. Adm. Code]  (2) The permittee shall control the total HAP emissions in pulping process condensates (any HAP-containing liquid) from affected sources listed in s. NR 464.06(2), as follows: (a) Collect no less than 11.0 pounds of HAP per ton of oven dry pulp (ODP) on a 15-day rolling average. [s. NR 464.07, Wis. Adm. Code]8 (b) All condensate shall be collected and conveyed in a closed collection system. [s. NR 464.06(4), Wis. Adm. Code] (c) On a daily basis the UNOX biological treatment tank shall be operated to: 1. Destroy at least 92 percent by weight of total HAPs from pulping process condensates, or 2. Remove at least 10.1 pounds of total HAP per ton of ODP. [s. NR 464.06(5), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>  (1) Maintain negative pressure at each enclosure or hood opening in the closed-vent system, as demonstrated by the procedures specified in 40 CFR §63.457(e). Each enclosure or hood opening closed during the initial performance test shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [s. NR 464.08(2), Wis. Adm. Code and Permit 99-SDD-109-R1]  (2) Each component of the closed-vent that is operated at positive pressure and located prior to a control device shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in 40 CFR §63.457(d). [s. NR 464.08(3), Wis. Adm. Code] (3) Each bypass line in the closed-vent system that	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>  (1) The total HAP content in pulping process condensate shall be measured as methanol, using EPA Method 305 or N.C.A.S.I. Method DI/MEOH-94.03. [ss. NR 464.09(13), Wis. Adm. Code, EPA Approval Letter dated 9/27/02] (2) Each enclosure and closed-vent system used to comply with condition H.4.a.(1)(a), shall comply with the following: (a) For each enclosure opening, a visual inspection of the closure mechanism specified in s. NR 464.08(2) shall be performed at least monthly to ensure the opening is maintained in the closed position and sealed. (b) Each closed-vent system required by s. NR 464.08(1) shall be visually inspected every month and at other times as requested by the department. The visual inspection shall include inspection of ductwork, piping, enclosures and connections to covers for visible evidence of defects. (c) For positive pressure closed-vent systems or portions

8. Collection requirement increased to comply with ch. NR 464 Clean Condensate Alternative.

**H. Stack S17 P17**

Digester, multiple-effect evaporator, and turpentine noncondensable gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a back up. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

could divert vent streams containing HAP to the atmosphere, shall comply with either of the following:

(a) On each bypass line the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or  
(b) For bypass line valves that are not computer controlled, the permittee shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that the valve or closure mechanism cannot be opened without breaking the seal. [s. NR 464.08(4), Wis. Adm. Code, Permit 99-SDD-109-R1]

(4) Each closed collection system for pulping process condensate shall meet the individual drain requirements specified in 40 CFR 63.960, 63.961 and 63.962 of subpart RR. [s. NR 464.06(4)(a), Wis. Adm. Code]

(5) Each condensate tank in the closed collection system shall meet both of the following requirements:  
(a) Each tank shall be equipped with a fixed roof, and all openings such as access hatches, sampling ports and gauge wells, shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system.  
(b) Each opening shall be maintained in a closed, sealed position, e.g., covered by a lid that is gasketed and latched, at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance or repair. [s. NR 464.06(4)(b), Wis. Adm. Code]

(6) The permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system (CMS) for each of the following daily parameters:  
(a) The number of softwood and hardwood cooks,  
(b) Total condensate flow,  
(c) The methanol content of condensate collected,  
(d) The pounds of total HAP (as methanol) collected per

of closed-vent systems, demonstrate no detectable leaks as specified in s. NR 464.08(3), measured initially and annually by the procedures in 40 CFR 63.457(d), incorporated by reference in s. NR 484.03(6).

(d) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR 63.457(e), incorporated by reference in s. NR 484.03(6).

(e) The valve or closure mechanism specified in s. NR 464.08(4)(b) shall be inspected at least monthly to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

(f) If an inspection required by pars. (a) to (e) identifies visible defects in ductwork, piping, enclosures or connections to covers required by s. NR 464.08, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable:

1. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
2. The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the permittee determines that the emissions resulting from immediate repair would be greater than the emission likely to result from delay. Repair of the equipment shall be completed by the end of the next process shutdown. [s. NR 464.09(11), Wis. Adm. Code, Permit 99-SDD-109-R1 and EPA Approval Letter dated 10/26/01]

(3) Each pulping process condensate closed collection system used to comply with condition H.4.a.(2)(c) shall comply as follows:

(a) Each closed collection system shall be visually inspected monthly and shall comply with the inspection and monitoring requirements specified in 40 CFR 63.964 of subpart RR, except:

1. Owners and operators shall comply with the recordkeeping requirements of s. NR 464.10 instead of the requirements of 40 CFR 63.964(a)(1)(vi) and (b)(3).

**H. Stack S17 P17**

Digester, multiple-effect evaporator, and turpentine noncondensable gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a back up. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

<p>ODP on a daily basis and 15-day rolling average. [s. NR 464.09(9), Wis. Adm. Code]</p> <p>(7) On an annual basis the permittee shall calculate the long-term methanol concentration of the foul condensate stream by adding data from the previous 12 months to past data. In the following year, on days the Optiquiest model predicts treatment compliance, the re-calculated average condensate methanol concentration shall be used to provide data for condition H.4. b.(6)(c). On days the Optiquiest model predicts excess emissions, sampling shall be conducted per condition H.4.(9)(b). [s. NR 464.09(13), Wis. Adm. Code, EPA Approval Letter dated 9/27/02]</p> <p>(8) The permittee shall install, calibrate, certify, operate and maintain a CMS for the UNOX biological treatment tank that includes the following.</p> <p>(a) Collect grab samples each shift (3 times per day) from the following sample locations:</p> <ol style="list-style-type: none"><li>1. Central Foul Condensate Collection Tank Pump Discharge to UNOX,</li><li>2. Aerated Lagoon Outlet to the UNOX,</li><li>3. UNOX outlet to the secondary clarifiers,</li></ol> <p>Preserve the samples collected from Locations 2 and 3 to a pH 2-3 with HCl. Retain all of the samples at &lt;4° C in a laboratory refrigerator pending the daily results of the Optiquiest model.</p> <p>(b) On a daily basis, monitor and record the following:</p> <ol style="list-style-type: none"><li>1. Effluent temperature entering UNOX.</li><li>2. Dissolved oxygen in UNOX Stage 1.</li><li>3. Dissolved oxygen in UNOX Stage 2.</li><li>4. Dissolved oxygen in UNOX Stage 3.</li><li>5. Mixed liquor volatile suspended solids in UNOX Stage 3.</li><li>6. Return sludge suspended solids from No.1 2° clarifier.</li><li>7. Effluent pH at outlet to secondary (2°) clarifiers.</li><li>8. Effluent temperature leaving UNOX.</li><li>9. Primary clarifier flow to UNOX.</li><li>10. Return sludge flow from No.1 2° clarifier to UNOX.</li><li>11. Return sludge flow from No.2 2° clarifier to UNOX.</li><li>12. Waste sludge flow to sludge pit.</li><li>13. Oxygen purity in UNOX vent gas.</li><li>14. Percent UNOX Stage 3 vent valve setting.</li><li>15. UNOX influent ammonia concentration.</li><li>16. UNOX outlet ammonia concentration.</li><li>17. Oxygen uptake rate in UNOX Stage 1.</li></ol>	<p>2. Owners and operators shall comply with inspection and monitoring requirements specified in subs. (1) and (11) instead of 40 CFR 63.964(a)(2) of subpart RR.</p> <p>(b) Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in s. NR 464.06(4)(b)1., measured initially and annually by the procedures in 40 CFR 63.457(d), incorporated by reference in s. NR 484.03(6).</p> <p>(c) If an inspection required by this section identifies visible defects in the closed collection system, or if an instrument reading of 500 ppm or greater above background is measured, then corrective actions specified in 40 CFR 63.964(b) of subpart RR shall be taken. [s. NR 464.09(12), Wis. Adm. Code, Permit 99-SDD-109-R1 and EPA Approval Letter dated 10/26/01]</p> <p>(4) For each applicable enclosure opening, closed-vent system and closed collection system, the permittee shall prepare and maintain a site-specific inspection plan, including a drawing or schematic of the components of applicable affected equipment, and shall record all of the following information for each inspection:</p> <ol style="list-style-type: none"><li>(a) Date of inspection.</li><li>(b) The equipment type and identification.</li><li>(c) Results of negative pressure tests for enclosures.</li><li>(d) Results of leak detection tests.</li><li>(e) The nature of the defect or leak and the method of detection, that is, visual inspection or instrument detection.</li><li>(f) The date the defect or leak was detected and the date of each attempt to repair the defect or leak.</li><li>(g) Repair methods applied in each attempt to repair the defect or leak.</li><li>(h) The reason for the delay if the defect or leak is not repaired within 15 days after discovery.<ol style="list-style-type: none"><li>(i) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days.</li></ol></li><li>(j) The date of successful repair of the defect or leak.</li><li>(k) The position and duration of opening of bypass line valves and the condition of any valve seals.</li><li>(l) The duration of the use of bypass valves on computer controlled valves. [s. NR 464.10(2), Wis. Adm. Code and Permit 99-SDD-109-R1]</li></ol> <p>(5) When the permittee determines that a portion of the</p>
--	--

**H. Stack S17 P17**

Digester, multiple-effect evaporator, and turpentine noncondensable gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a back up. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

18. Oxygen uptake rate in UNOX Stage 2.
19. Oxygen uptake rate in UNOX Stage 3.
20. Secondary clarifier dissolved oxygen concentration.
21. Average condensate methanol concentration.
22. Condensate daily flow rate to UNOX.
23. Aerated lagoon flow rate.

[s. NR 464.09(13), Wis. Adm. Code, EPA Approval Letter dated 9/27/02]

(9) On a daily basis, the permittee shall demonstrate compliance with at least one of the condensate treatment standards of condition H.4. a. (2)(c) using the following procedures.

(a) The methanol percent reduction shall be calculated using the following equations:

$$R = \frac{f_{\text{bio}}(\text{MeOH})}{(1+1.087(r))} \times 100$$

$$r = \frac{F_{\text{nonmethanol}}}{F_{\text{methanol}}}$$

The methanol mass removal shall be calculated using the following equation:

$$F = F_{\text{methanol}} \times \frac{f_{\text{bio}}(\text{MeOH})}{(1+1.087(r))} \times 100$$

Where:

R = percent destruction of total HAP.

$f_{\text{bio}}(\text{MeOH})$  = the fraction of methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the appropriate procedures specified in Appendix C of 40 CFR part 63.  
r = ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass to methanol mass.

$F_{\text{nonmethanol}}$  = the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass flow rates entering the biological treatment system.

$F_{\text{methanol}}$  = the mass flow rate of methanol entering the biological treatment system.

F = methanol mass removal.

(b) Execute the Optiquest model on a daily basis after the data from the previous day has been obtained. The inputs into the model are the 24-hour average values of the input variables from the previous 6AM-6AM mill day. If the Optiquest model demonstrates compliance with either standard (passes), nothing further is required for that day.

LVHC system equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger, or the equipment is inaccessible because inspecting personnel would be elevated more than 2 meters above a support surface and the equipment cannot be inspected from the floor, that equipment is exempt from the monthly and annual inspections and monitoring requirements.

(a) For each portion of the LVHC system equipment that the permittee designates as unsafe, the permittee shall prepare and make available to the department a written plan that identifies all parts of the system that are designated unsafe, explains why the equipment is unsafe to inspect, and provides a schedule to inspect each unsafe piece of equipment, which is as frequent as practicable during safe-to-inspect times.

(b) For each portion of the LVHC system equipment that the permittee designates as inaccessible, the permittee shall prepare and make available to the department a written inspection plan that identifies all parts of the system that are designated as inaccessible, explains why the equipment is inaccessible, and provides a schedule to inspect each inaccessible piece of equipment, which is at least once every 3 years.

[s. NR 464.09(13), Wis. Adm. Code, and EPA Approval Letter dated 10/26/2001]

(10) Whenever compliance emission testing is required for total HAP emissions shall follow the methods outlined in 63.457(d). [Permit 99-SDD-109-R1]

(11) The permittee shall comply with the applicable recordkeeping requirements of ch. NR 460. [s. NR 464.10, Wis. Adm. Code]

(12) The permittee shall comply with the applicable reporting requirements of ch. NR 460. [s. NR 464.11, Wis. Adm. Code]

(13) To reestablish the value of any operating parameter required to be monitored or to establish new parameters, the permittee shall follow the procedures of s. NR 464.09(14), Wis. Adm. Code.  
[ss. NR 464.09(13) and (14), Wis. Adm. Code]

**H. Stack S17 P17**

Digester, multiple-effect evaporator, and turpentine noncondensable gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a back up. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

If the Optiquiest model indicates that sampling is required (because a standard may be exceeded), the representative retained liquid samples obtained in (8)(a) are sent to an outside contracted laboratory for analyses. The laboratory composites the three shift samples from each of the locations and analyzes the total HAP content (as methanol). The three methanol concentrations along with the corresponding flows are used to recalculate the fbio MeOH factor for that day. New values for R and F are calculated for that day using the average r factor determined during the last condensate treatment performance test.

(c) On a monthly basis the permittee shall collect samples as indicated in (8)(a), analyze them for total HAP content, and calculate the daily fbio regardless of the results of the Optiquiest Model.

[s. NR 464.09(13), Wis. Adm. Code, EPA Approval Letter dated 9/27/02]

(10) The permittee shall operate each control device (lime kiln P12, boiler B11, and the UNOX reactor) in a manner consistent with the minimum or maximum, as appropriate, operating parameter value or procedure required to be monitored. Except as provided under condition H.4.b.(11), operation of a control device below minimum operating parameter values or above maximum operating parameter values established or failure to perform procedures required shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions.

[s. NR 464.09(15), Wis. Adm. Code]

(11) Periods of excess emissions from the LVHC collection system or control devices (lime kiln P12 and boiler B11) that are reported under s. NR 464.11, are not a violation of condition H.4.a.(1) provided that the time of excess emissions, excluding periods of startup, shutdown or malfunction, divided by the total process operating time in a semi-annual reporting period does not exceed one percent.

[s. NR 464.03(5), Wis. Adm. Code]

**5. Pollutant: Total Reduced Sulfur and Reduced Sulfur Compounds**

<b>H. Stack S17 P17</b> Digester, multiple-effect evaporator, and turpentine noncondensable gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a back up. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.	
<b>a. Limitation:</b> combust gases in a lime kiln subject to NR 440.45(4)(a)5., Wis. Adm. Code [ss. 440.45(4)(a)1., Wis. Adm. Code; and NR 417.06(2), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) NCGs from the digester and multiple-effect evaporators shall be routed to the lime kiln (P12) for incineration. [ss. NR 417.06(2) and 407.09(4)(a), Wis. Adm. Code]  (2) During shut-down times of P12, NCGs shall be routed to B11 for incineration. [s. NR 417.06(2) and 407.09(4)(a), Wis. Adm. Code]  (3) <u>Compliance Assurance Monitoring (CAM):</u> The digester system is a pollutant-specific emissions unit subject to the CAM requirements of Part 64 CFR. The CAM monitoring requirements are fulfilled by complying with condition H.5.b.(1) or (2). [s. 285.65(13), Wis. Stats., and 40 CFR Part 64.6(c)]	(1) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the NCG pipes to the lime kiln and power boiler B11. [s. NR 439.04(1)(d), Wis. Adm. Code]  (2) The permittee shall submit to the Department on a quarterly basis NCG venting over one minute and summaries of the total venting time in that quarter. [s. NR 439.04(1)(d), Wis. Adm. Code]  (3) The permittee shall calibrate and maintain the LVHC NCG monitoring system according to the manufacture's specifications. [s. NR 439.04(1)(d), Wis. Adm. Code]  (4) Whenever testing for reduced sulfur compounds is required, the permittee shall follow the procedures in NR 439.07 and use methods approved by the department. [ss. NR 439.06(8) and NR 439.07, Wis. Adm. Code]

<p><b>I. Stack S20 P20</b> Brown stock washer system. This stack is a grouping of similar process sources. Emissions from this source are uncontrolled and vented to the atmosphere. Last modified in 1965.</p> <p><b>Stack S21 P21</b> Screening and cleaning system. The pulp is cleaned of impurities in the cleaners and screeners and sent to the Decker system. Last modified in 1984. Uncontrolled</p> <p><b>Stack S22 P22</b> Decker system. From the screening system, the pulp is dewatered at the Decker or Wet-lap Machine and finally stored in the High Density Pulp Storage area. Last modified in 1984. Uncontrolled</p>	
<p><b>1. Pollutant: Volatile Organic Compound Emissions</b></p> <p>(1) LACT for P20 is the use of fresh water or equal in the last stage of this process. [s. NR 424.03(2)(c), Wis. Adm. Code] Fresh water is utilized in reducing VOC and TRS emissions from pulping operating. "Fresh water" is defined as the water withdrawn from the Fox River and used throughout the facility for process or cooling purposes.</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) The permittee shall use fresh water to wash the brown stock in the last stage of the brown stock washer line or use technology which has been demonstrated to be equivalent at reducing VOC emissions from this source. [s. NR 407.09(4)(a), Wis. Adm. Code]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) Whenever compliance emission testing is required for Organic Compound Emissions, the permittee shall use US EPA Method 18, 25, 25A, or 25B [s. NR 439.06(3)(a), Wis. Adm. Code]</p> <p>(2) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the fresh water pipes to the brown stock washer system. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>



<b>J. LEFT INTENTIONALLY BLANK – RESERVED FOR FUTURE USE.</b>	
<b>1. Pollutant:</b>	
<b>a. Limitation:</b>	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>

<b>K. S11, P11</b> 5.0 TPH No. 11 Paper Machine (Beloit Corp.) with size press, installed 1993. S13, P13 9.17 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryers, installed 1987. S14, P14 5.6 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryers, installed 1969. S15, P15 10 TPH No. 15 Paper Machine with size press and IR dryer, installed 1994. S16, P16 11.3 TPH combined capacity, No. 10 Paper Machine with IR and Yankee dryers, installed 1948; and No. 12 Paper Machine with IR dryer, installed 1957.	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>a. Limitations for all stacks combined on each paper machine:</b> (1) 1.0 pounds per hour for P11. [ss. NR 415.05(2), and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.] (2) 1.0 pounds per hour for P13. [ss. NR 415.05(2), and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.] (3) 1.0 pounds per hour for P14. [s. NR 415.05(1)(o), and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.] (4) 1.0 pounds per hour for P15. [s. NR 415.05(2), and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.] (5) 2.0 pounds per hour for P16. [s. NR 415.05(1)(o), and NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee may burn only natural gas in the dryers associated with these paper machines. [s. NR 407.09(4)(a)1., Wis. Adm. Code]	(1) Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5, including backhalf emissions using US EPA Method 202. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code] (2)(a) The permittee shall keep monthly records of the type of fuel burned in the paper machine dryers. (b) The permittee shall keep records for each paper machine of the average hourly paper production rate (monthly paper production/monthly operating hours), and the calculation of the average hourly emission rate using the above parameter and the emission factor of 0.04 lb/ton paper. [s. NR 439.04(1)(d), Wis. Adm. Code]
<b>2. Pollutant: Visible Emissions</b>	
<b>a. Limitation:</b> 20% Opacity [ss. NR 431.05 and NR 431.04(2), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) See Particulate Matter Emission Compliance Demonstration section listed for this source.	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) See recordkeeping and monitoring requirements for particulate matter emissions.
<b>3. Pollutant: Volatile Organic Compounds</b>	

<p><b>K. S11, P11</b> 5.0 TPH No. 11 Paper Machine (Beloit Corp.) with size press, installed 1993.  <b>S13, P13</b> 9.17 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryers, installed 1987.  <b>S14, P14</b> 5.6 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryers, installed 1969.  <b>S15, P15</b> 10 TPH No. 15 Paper Machine with size press and IR dryer, installed 1994.  <b>S16, P16</b> 11.3 TPH combined capacity, No. 10 Paper Machine with IR and Yankee dryers, installed 1948; and  No. 12 Paper Machine with IR dryer, installed 1957.</p>	
<p><b>a. Limitations for P11, P13, P15:</b>  (1) LACT - current operating practices for the paper machine station. [s. NR 424.03(2)(c), Wis. Adm. Code]  (2) LACT - 2.9 pounds per gallon coating excluding water for the coating station. [s. NR 424.03(2)(c), Wis. Adm.]  (3) Monthly VOC emissions from a size press shall not exceed the following:  (a) 5050 pounds per month on P11. [s. 285.65(7), Wis. Stats and Permit 93-CTS-413]  (b) 1666 pounds per month on P13. [s. NR 406.04(1)(g), Wis. Adm. Code]  (c) 1666 pounds per month on P15. [s. NR 406.04(1)(g), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b>  (1) The permittee shall demonstrate compliance with record keeping for the paper coating station and size presses. [s. NR 407.09(4)(a), Wis. Adm. Code]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b>  (1) Whenever compliance emission testing is required for Organic Compound Emissions, the permittee shall use US EPA Method 18, 25, 25A, or 25B [s. NR 439.06(3)(a), Wis. Adm. Code]  (2) The permittee shall keep Material Safety Data Sheets (MSDS) <sup>9</sup> or other alternate documents that indicate the VOC content of each raw material used by this process. [s. NR 439.04(1)(d), Wis. Adm. Code]  (3) For the paper coating station and size presses the permittee shall keep records of:  (a) a unique name and identification of each VOC containing raw material, as applied;  (b) VOC content of each raw material, as applied, in units of pounds of VOC per gallon excluding water;  (c) volume of VOC containing raw material used per month, as applied, in units of gallons, excluding water;  (d) total VOC usage in units of pounds per month. [ss. NR 439.04(5)(a), Wis. Adm. Code and NR 439.04(3), Wis. Adm. Code]  (3) The permittee shall keep monthly records of the pulp additive usage, in gallons or pounds as appropriate and VOC content, as a weight percent or weight per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p><b>4. Pollutant:</b> *NR 445 Hazardous Air Pollutant Emissions (formaldehyde, acetaldehyde)</p>	

<sup>9</sup> This does not apply to pulp because OSHA does not require MSDS for pulp.

<b>K. S11, P11</b> 5.0 TPH No. 11 Paper Machine (Beloit Corp.) with size press, installed 1993. <b>S13, P13</b> 9.17 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryers, installed 1987. <b>S14, P14</b> 5.6 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryers, installed 1969. <b>S15, P15</b> 10 TPH No. 15 Paper Machine with size press and IR dryer, installed 1994. <b>S16, P16</b> 11.3 TPH combined capacity, No. 10 Paper Machine with IR and Yankee dryers, installed 1948; and No. 12 Paper Machine with IR dryer, installed 1957.	
<b>a. Limitation:</b> (1) * Control emissions of formaldehyde and acetaldehyde with Best Available Control Technology (BACT). (a) BACT for formaldehyde shall consist of Current Operating Practices. [s. NR 445.07(1)(c), Wis. Adm. Code] (b) BACT for acetaldehyde shall consist of minimizing the acetaldehyde content in paper machine coatings, paper additives and cleaning chemicals. [s. NR 445.07(1)(c), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
	(1) *The permittee shall use methods and plans approved, in writing, by the Department for compliance emission testing of acetaldehyde or formaldehyde emissions. [ss. NR 407.09(1)(c)1.b. and 439.06(8), Wis. Adm. Code]

<b>L. S52, P52</b> No. 52 Extruder: polyethylene extruder 62 inch, installed or last modified in 1979. <b>P33, B80 and T33</b> No. 33 Wax Coater: coats downsized parent rolls from the paper machines when wax coatings are desired, 6.4 mmbth boiler B80, 1 corona treater, 11,000 gallon wax tank T33, installed, last modified in 2001.	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>(a) Limitations for all stacks combined:</b> (1) 0.60 pounds per hour for P52. [s. NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee shall demonstrate compliance through record keeping. [s. NR 407.09(4)(a)1., Wis. Adm. Code]	(1) Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5, including backhalf emissions using US EPA Method 202. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code] (2) The permittee shall keep records of total particulate matter emissions calculations in units of pounds per hour on a monthly average basis. [s. NR 439.04(1)(d), Wis. Adm. Code]
<b>2. Pollutant: Volatile Organic Compounds</b>	
<b>a. Limitations:</b> (1) The VOC content of each coating shall not exceed 2.9 pounds per gallon coating, excluding water, delivered to each coating applicator from a paper coating line. [ss. NR 422.07(2), Wis. Adm. Code]  (2) Emit no more than 1666 pounds per month from coating operations and associated cleaning operations from process P33 including tank #T33. [s. NR 406.04(1)g., Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>

<p><b>L. S52, P52</b> No. 52 Extruder: polyethylene extruder 62 inch, installed or last modified in 1979.</p> <p><b>P33, B80 and T33</b> No. 33 Wax Coater: coats downsized parent rolls from the paper machines when wax coatings are desired, 6.4 mmbth boiler B80, 1 corona treater, 11,000 gallon wax tank T33, installed, last modified in 2001.</p>	
<p>(1) USEPA Method 24 or 24A results, Material Safety Data Sheets, or equivalent documents, shall be used to demonstrate the VOC content of each coating provided they contain sufficient information to determine the VOC content, as applied. [s. NR 439.04(5), Wis. Adm. Code]</p>	<p>(1) <u>Reference Test Method for VOC Content:</u> Whenever a determination of coating VOC content is required, the appropriate US EPA Method 24 or 24A shall be used to demonstrate compliance. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(2) For each coating, clean-up solvent, and other material that emits VOCs, the permittee shall keep and maintain the following records per source:</p> <ul style="list-style-type: none"> <li>(a) A unique name or identification number.</li> <li>(b) The usage in gallons per day, as applied.</li> <li>(c) The VOC content in pounds per gallon less water, as applied.</li> <li>(d) Monthly VOC emissions from P33, in pounds per month.</li> <li>(e) USEPA Method 24 or 24A results, Material Safety Data Sheets, or equivalent documents that demonstrate the VOC content of each coating as long as they contain sufficient information to determine the VOC content, as applied.</li> </ul> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p><b>3. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, 40 CFR Part 63, Subpart JJJJ—National Emission Standards for HAPs for Paper and Other Web Coating (organic HAPs)</b></p>	
<p><b>a. Limitations:</b> On and after December 5, 2005, the permittee shall limit organic HAP emissions from all coating materials (inks, varnishes, adhesives, primers, solvents, reducers, and other coating materials applied to a substrate via a web coating line) to the level specified below:</p> <ul style="list-style-type: none"> <li>(2) No more than 4 percent of the mass of coating materials applied for each month; or</li> <li>(3) No more than 20 percent of the mass of coating solids applied for each month.</li> </ul> <p>[40 CFR 63.3320(a) and (b), s. 285.65(13), Stats.]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) The source is in compliance with one of the emission standards in condition L.3.a, if each coating material applied at the source is applied as-purchased and contains no more than 0.04 kilogram (kg) organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, as determined in accordance with condition L.3.c. [40 CFR 63.3370(b), s. 285.65(13), Stats.]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) <i>Organic HAP content</i> The permittee shall determine the organic HAP mass fraction of each coating material as-purchased using one of the following procedures:</p> <ul style="list-style-type: none"> <li>(a) Method 311. The permittee may test the coating material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the permittee. The organic HAP content shall be calculated according to the following: <ul style="list-style-type: none"> <li>(i) Include each organic HAP determined to be present at greater than or equal to 0.1 mass percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR</li> </ul> </li> </ul>

<p><b>L. S52, P52</b> No. 52 Extruder: polyethylene extruder 62 inch, installed or last modified in 1979.</p> <p><b>P33, B80 and T33</b> No. 33 Wax Coater: coats downsized parent rolls from the paper machines when wax coatings are desired, 6.4 mmbth boiler B80, 1 corona treater, 11,000 gallon wax tank T33, installed, last modified in 2001.</p>	
	<p>1910.1200(d)(4) and greater than or equal to 1.0 mass percent for other organic HAP compounds.</p> <p>(ii) Express the mass fraction of each organic HAP the permittee includes according to (i) as a value truncated to four places after the decimal point (for example, 0.3791).</p> <p>(iii) Calculate the total mass fraction of organic HAP in the tested material by summing the counted individual organic HAP mass fractions and truncating the result to three places after the decimal point (for example, 0.763).</p> <p>(b) Method 24. For coatings, determine the volatile organic content as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to the permittee.</p> <p>(c) Formulation data. The permittee may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the permittee by the manufacturer of the material. In the event of an inconsistency between Method 311 (appendix A of 40 CFR part 63) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used. [40 CFR 63.3360(c), s. 285.65(13), Stats.]</p> <p>(2) The permittee shall maintain records on a monthly basis on the organic HAP content of each coating. [40 CFR 63.3410(a), s. 285.65(13), Stats.]</p> <p>(3) The permittee shall comply with the applicable recordkeeping requirements of ch. NR 460. [40 CFR 63.3410(a), s. 285.65(13), Stats.]</p> <p>(4) The permittee shall submit semiannual compliance reports as specified under condition O.3.b(4). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(5) The permittee shall comply with the applicable reporting requirements of ch. NR 460. [40 CFR 63.3400, s. 285.65(13), Stats.]</p>

<b>M. S55, P55</b> No. 55 Extruder: polyolefin extruder, 1-color 72 in. Flexo. Printer, 0.75 mmbth heat input, 1993. <b>S56, P56</b> No. 56 Extruder: 2 polyolefin extruders 1-color 72 in. Flexo. Printer, 2 coaters, 9.32 mmbth, 1973. <b>S59, P59</b> No. 59 Tandem Extruder: 2 polyolefin extruders, 1-color 80 in. Flexo. Printer, coater, 10mmbth, 1998. <b>S72, P72</b> No. 72 Flexographic Printing Press: 10-color 74 inch, varnish coater, 4.4 mmbth, 2003. <b>S76, P76</b> No. 76 Flexographic Printing Press: 4-color 74 inch, varnish coater, 4.0 mmbth, 2001.	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>a. Limitations for all stacks on each process combined:</b> (1) 0.75 pounds per hour for P55. [s. NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.] (2) 0.41 pounds per hour from S56A and S56B each, and 0.82 pounds per hour total for P56. [s. NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.] (3) 0.50 pounds per hour from S59A and S59B each, and 1.00 pounds per hour total for P59. [s. NR 404.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) The permittee shall demonstrate compliance through record keeping. [s. NR 407.09(4)(a)1., Wis. Adm. Code]	(1) Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5, including backhalf emissions using US EPA Method 202. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code] (2) The permittee shall keep the following records: (a) site specific polyethylene emission data showing emission factors; (b) polyethylene usage on a monthly basis on each extruder as an estimated percent of the total facility extruder department production; (c) total particulate matter emissions calculations in units of pounds per hour on a monthly average basis. [s. NR 439.04(1)(d), Wis. Adm. Code]
<b>2. Pollutant: Visible Emissions</b>	
<b>a. Limitation:</b> 20% Opacity [s. NR 431.05, Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) See Particulate Matter Emission Compliance Demonstration section listed for this source.	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) See recordkeeping requirements for particulate matter emissions.
<b>3. Pollutant: Volatile Organic Compounds</b>	

<p><b>M. S55, P55</b> No. 55 Extruder: polyolefin extruder, 1-color 72 in. Flexo. Printer, 0.75 mmbth heat input, 1993.</p> <p><b>S56, P56</b> No. 56 Extruder: 2 polyolefin extruders 1-color 72 in. Flexo. Printer, 2 coaters, 9.32 mmbth, 1973.</p> <p><b>S59, P59</b> No. 59 Tandem Extruder: 2 polyolefin extruders, 1-color 80 in. Flexo. Printer, coater, 10mmbth, 1998.</p> <p><b>S72, P72</b> No. 72 Flexographic Printing Press: 10-color 74 inch, varnish coater, 4.4 mmbth, 2003.</p> <p><b>S76, P76</b> No. 76 Flexographic Printing Press: 4-color 74 inch, varnish coater, 4.0 mmbth, 2001.</p>	
<p><b>a. Limitations:</b></p> <p>(1) The permittee shall operate each flexographic printing station with one of the following requirements:</p> <p>(a) The volatile fraction of ink, as it is applied to the substrate, contains 25% by volume or less of VOC and 75% by volume or more of water.</p> <p>(b) The ink, as it is applied to the substrate, less water, contains 60% by volume or more nonvolatile material. The term <i>water</i> includes compounds that are exempted from the VOC definition specified in s. NR 400.02(162), Wis. Adm. Code. [s. NR 422.14(2), Wis. Adm. Code and Permit 03-MHR-010]</p> <p>(2) The VOC content of each coating shall not exceed 2.9 pounds per gallon coating, excluding water, delivered to each coating applicator from a paper coating line. [ss. NR 422.07(2), and NR 424.03(3), Wis. Adm. Code and Permit 03-MHR-010]</p> <p>(3) Not including the dryers on P72, the permittee may not emit more than 6,580 pounds of VOCs per month from P72, based on a 12-month rolling average. [s. 285.65(7), Wis. Stats. and Permit 03-MHR-010]</p> <p>(4) The permittee may only fire natural gas or propane in the dryers and flame treaters on P72. [s.285.65(7), WI Stats. and Permit 03-MHR-010]</p> <p>(5) The permittee may not emit more than 1666 pounds per month from the graphic arts operations and associated cleaning operations of processes P55, P59 and P76 individually. [s. NR 406.04(1)h., Wis. Adm. Code]</p> <p>(6) The permittee may not emit more than 1666 pounds per month from the plastic extrusion, coating operations and associated cleaning operations of processes P55, P59 and P76 individually. [s. NR 406.04(1)g., Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) USEPA Method 24 or 24A results, Material Safety Data Sheets, or equivalent documents, shall be used to demonstrate the VOC and water content of the volatile fraction of each ink as long as they contain sufficient information to determine the VOC and water contents in volume percent, as applied. [s. 285.65(3), Wis. Stats. and Permit 03-MHR-010]</p> <p>(2) USEPA Method 24 or 24A results, Material Safety Data Sheets, or equivalent documents, shall be used to demonstrate the VOC content of each coating as long as they contain sufficient information to determine the VOC content, in pounds per gallon, as applied. [s. 285.65(3), Wis. Stats. and Permit 03-MHR-010]</p> <p>(3) Within 30 days after the end of each month, the permittee shall calculate and record daily VOC emissions for each day during that month using the following formula:</p> $E = \sum_{i=1}^n U_i * (VC_i / 100) \quad ; \text{ where}$	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, the appropriate US EPA Method; 18, 25, 25A or 25B shall be used to demonstrate compliance. [s. NR 439.06(3)(a), Wis. Adm. Code]</p> <p>(2) <u>Reference Test Method for Printing Inks and Related Coating Emissions:</u> Whenever a determination of VOC content is required, the appropriate US EPA Method; 24 or 24A shall be used. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(3) The permittee shall keep and maintain the following records:</p> <p>(a) A unique name or identification number for each ink, coating, clean-up solvent, and other material that contains VOCs, as applied.</p> <p>(b) The usage of each ink, coating, clean-up solvent, and other material that contains VOCs, in pounds per day, as applied.</p> <p>(c) The VOC content of each ink, clean-up solvent, and other material that contains VOCs, in weight percent, as</p>



<p><b>M. S55, P55</b> No. 55 Extruder: polyolefin extruder, 1-color 72 in. Flexo. Printer, 0.75 mmbth heat input, 1993.</p> <p><b>S56, P56</b> No. 56 Extruder: 2 polyolefin extruders 1-color 72 in. Flexo. Printer, 2 coaters, 9.32 mmbth, 1973.</p> <p><b>S59, P59</b> No. 59 Tandem Extruder: 2 polyolefin extruders, 1-color 80 in. Flexo. Printer, coater, 10mmbth, 1998.</p> <p><b>S72, P72</b> No. 72 Flexographic Printing Press: 10-color 74 inch, varnish coater, 4.4 mmbth, 2003.</p> <p><b>S76, P76</b> No. 76 Flexographic Printing Press: 4-color 74 inch, varnish coater, 4.0 mmbth, 2001.</p>	
<p>E = total VOC emission rate, in pounds per day</p> <p>U<sub>i</sub> = usage of ink i, coating i, clean-up solvent i, or other material i that contains VOCs, in pounds per day, as applied.</p> <p>V<sub>Ci</sub> = VOC content of ink i, coating i, clean-up solvent i, or other material i that contain VOCs in weight percent, as applied.</p> <p>n = total number of inks, coatings, clean-up solvents, and other materials that contain VOCs used in that day [s. 285.65(3), Wis. Stats. and Permit 03-MHR-010]</p> <p>(4) Within 30 days after the end of each month, the permittee shall calculate monthly VOC emissions by summing the daily emissions for each day during that month., and, based on a 12-month rolling average. The 12-month average shall be the emissions for the most recent 12 consecutive months divided by 12 months [s. 285.65(3), Wis. Stats. and Permit 03-MHR-010]</p>	<p>applied.</p> <p>(e) Daily VOC emissions, in pounds per day, for P72.</p> <p>(f) Monthly VOC emissions, in pounds per month.</p> <p>(f) Monthly VOC emissions, in pounds per month based on a 12-month rolling average, for P72.</p> <p>(g) USEPA Method 24 or 24A results, Material Safety Data Sheets, and equivalent documents that demonstrate the VOC and water content of the volatile fraction of each ink as long as they contain sufficient information to determine the VOC and water contents in volume percent, as applied.</p> <p>(h) USEPA Method 24 or 24A results, Material Safety Data Sheets, and equivalent documents that demonstrate the VOC content of each coating as long as they contain sufficient information to determine the VOC content, in pounds per gallon, as applied. [s. NR 439.04(1)(d), Wis. Adm. Code and Permit 03-MHR-010]</p>
<p><b>4. Pollutant:</b> MACT: Standards for Printing and Publishing (40 CFR 63.820 through 63.830)</p>	
<p><b>a. Limitations:</b></p> <p>(1) Apply no more than 882 pounds per month, for every month, of organic HAP on product and packaging rotogravure or wide-web flexographic printing presses combined. A wide-web flexographic press is a press capable of printing substrates greater than 18 inches in width. [s. NR 466.015(3)(b), Wis. Adm. Code]</p> <p>(2) If in any month the permittee does not comply with M.4.a.(1), starting with that month, the permittee shall comply with all relevant requirements of chapter NR 466, Wis. Adm Code, and is no longer eligible to use the provisions of M.4.a.(1), even if in subsequent months the affected source meets the criteria of NR 466.015(3), Wis. Adm. Code. [s. NR 466.015(4), Wis. Adm. Code]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) Exempt from other requirements of chapter NR 466 unless the facility applies more than 882 pounds per month of organic HAP via all rotogravure and/or flexographic presses. [40 CFR 63.829]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) The permittee of each product and packaging rotogravure or wide-web flexographic printing affected source shall maintain records for 5 years. [40 CFR 63.829(e)]</p> <p>(2) The permittee of each product and packaging rotogravure and wide-web flexographic printing which apply less than 882 pounds per month of organic HAP must demonstrate compliance on a monthly basis by maintaining records of the: total pound of HAP applied each month; and, total volume and organic HAP content of each material applied on product and packaging rotogravure and wide-web flexographic printing presses. [40 CFR 63.829(e)(2)]</p>
<p><b>5. Pollutant:</b> *NR 445 Table 3 Hazardous Air Pollutant Emissions</p>	

<p><b>M. S55, P55</b> No. 55 Extruder: polyolefin extruder, 1-color 72 in. Flexo. Printer, 0.75 mmbth heat input, 1993.  <b>S56, P56</b> No. 56 Extruder: 2 polyolefin extruders 1-color 72 in. Flexo. Printer, 2 coaters, 9.32 mmbth, 1973.  <b>S59, P59</b> No. 59 Tandem Extruder: 2 polyolefin extruders, 1-color 80 in. Flexo. Printer, coater, 10mmbth, 1998.  <b>S72, P72</b> No. 72 Flexographic Printing Press: 10-color 74 inch, varnish coater, 4.4 mmbth, 2003.  <b>S76, P76</b> No. 76 Flexographic Printing Press: 4-color 74 inch, varnish coater, 4.0 mmbth, 2001.</p>	
<p><b>a. Limitations:</b>  (1) The permittee shall limit ammonia emissions from P72 to 96 pounds per day. [ss. NR 404.08(2) and NR 445.04(1)(a), Wis. Adm. Code and Permit 03-MHR-010]</p>	
<p><b>b. Compliance Demonstration</b></p> <p>(1) Department-approved USEPA test method results, Material Safety Data Sheets, or equivalent documents shall be used to determine the ammonia content of each ink and coating, (as applied) as long as they contain sufficient information to determine the ammonia contents in pounds per gallon or weight percent. [s. 439.06(8), Wis. Adm. Code, s. 285.65(3), Wis. Stats. and Permit 03-MHR-010]</p> <p>(2) Within 30 days after the end of each month, the permittee shall calculate and record daily ammonia emissions from P72 for each day during that month using the following formulas:  Ammonia = <math>A_w + A_v</math>  <math display="block">A_w = \sum_{w=1}^m IU_w * (AC_w * 0.01)</math> <math display="block">A_v = \sum_{v=1}^n IU_v * AC_v \quad ; \text{ where}</math> Ammonia = ammonia emissions, in pounds per day  <math>A_w</math> = ammonia emissions (when the ammonia content is weight-based) from using ink w or coating w, in pounds per day  <math>IU_w</math> = usage of ink w or coating w, in pounds per day  <math>AC_w</math> = ammonia content of ink w or coating w, in weight percent  <math>A_v</math> = ammonia emissions (when the ammonia content is volume-based) from using ink v or coating v, in pounds per day  <math>IU_v</math> = usage of ink v or coating v, in gallons per day  <math>AC_v</math> = ammonia content of ink v or coating v, in pounds per gallon  m = total number of inks and coatings used during that day, for which the ammonia content is weight-based  n = total number of inks and coatings used during that day, for which the ammonia content is volume-based  [s. 285.65(3), Wis. Stats. and Permit 03-MHR-010]</p>	<p><b>c. Reference Test Methods, Record keeping, and Monitoring</b></p> <p>(1) <u>Reference Test Method for Emissions of Ammonia</u>: Whenever compliance emission testing is required, a department-approved US EPA test method shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]</p> <p>(2) The permittee shall keep and maintain the following records:  (a) A unique name or identification number for each ink and coating.  (b) The usage of each ink and coating, in pounds per day or gallons per day.  (c) The ammonia content of each ink and coating, in pounds per gallon or weight percent (as applied).  (d) Ammonia emissions, in pounds per day.  (e) Copies of USEPA Method 24 and 24A results, Department-approved USEPA test method results, Material Safety Data Sheets, analytical records from suppliers, and other records that list the ammonia content of each ink and coating (as applied), in pounds per gallon or weight percent.  [s. 439.04(1)(d), Wis. Adm. Code and Permit 03-MHR-010]</p>

<b>N. S45 P45</b> Log storage, chipping, chip storage, conveying, and screening system. <b>S49 P49</b> Vehicle traffic on various paved & unpaved roads throughout facility. <b>S50, P50</b> Red Hills Industrial Landfill with passive gas collection, phase V start in 1990.	
<b>1. Pollutant: Particulate Matter Emissions</b>	
<b>a. Limitation:</b> The permittee may not cause, allow, or permit any materials to be handled, transported, or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. Nor may a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted or demolished without taking such precautions as outlined in NR 415.04(1), Wis. Adm. Code. [s. NR 415.04, Wis. Adm. Code] (2) The permittee shall apply asphalt, water, suitable chemicals, or other Department approved methods on dirt roads, material stockpiles, and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor, or water pollution problem. [s. NR 415.04(1)(b), Wis. Adm. Code]	(1) The permittee shall keep a log, indicating the type of precaution used and the area being treated. [s. NR 439.04(1)(d), Wis. Adm. Code]
<b>2. Pollutant: Visible Emissions</b>	
<b>a. Limitation:</b> 20% opacity. [s. NR 431.04(2), Wis. Adm. Code]	
<b>b. Compliance Demonstration</b>	<b>c. Reference Test Methods, Record keeping, and Monitoring</b>
(1) See Particulate Matter Emission Compliance Demonstration section listed for this source.	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code]  (2) See recordkeeping methods for particulate matter emissions.

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>1. Alternate Operating Scenario: Use of raw materials not included in the permit application.</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>(1) If the permittee has the capability to burn or use a raw material not included in the application reviewed for this permit, the permittee may use this material without first obtaining a construction permit provided the following conditions are met:</p> <p>(a) The source has continuously had such design capability to burn or use the raw material.</p> <p>(b) The use will not cause or exacerbate the violation of an ambient air quality standard or an ambient air increment.</p> <p>(c) The use is not prohibited by any permit, plan approval or special order applicable to the source.</p> <p>(d) The use will not result in a violation of any emission limit in chs. NR 405, 408, 409, 415 to 436, and 445, Wis. Adm. Code.</p> <p>(e) The use will not subject the source to any standard or regulation under s. 112 of the Clean Air Act (42 USC 7412).</p> <p>[s. NR 406.04(4)(a), Wis. Adm. Code]</p>	<p>(1) Any calculations and supporting material required demonstrating compliance with Condition O.1.a. (1) shall be kept on file by the permittee. [s.NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(2) The permittee shall notify the Department when a new alternate fuel will be fired in any boiler at least six (6) weeks prior to initially firing the fuel. As a part of the notification, the permittee shall provide the analysis which shows that the firing of the new alternate fuel meets the requirements of Condition O.1.a.(1). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

<b>O. Conditions Applicable to the Entire Facility</b>			
<b>2. Emissions Testing</b>			
<b>a. Conditions</b>			<b>b. Compliance Demonstration, Reference Methods, Recordkeeping and Monitoring Requirements</b>
(1) For each source and pollutant listed, emission tests shall be conducted every 24 months, within 90 days of the anniversary date shown below, except as provided in Condition O.2.a. (2). [s. NR 439.075(3)(b), Wis. Adm. Code]			(1) Whenever emissions testing is required: (a) Unless the Department requires or approves the performance of a test at less than capacity, all compliance emission tests shall be performed with the equipment operating at capacity or as close to capacity as practicable. [s NR 439.07(1), Wis. Adm. Code]
<u>Source</u>	<u>Pollutant Tested</u>	<u>Date</u>	(b) The Department shall be notified in writing at least 20 business days prior to any stack testing so a Department representative can witness the testing. At the time of notification an emissions test plan shall be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method specified in the permit. [s NR 439.07(2), Wis. Adm. Code]
Boiler B07	Particulate matter	Sept. 05, 2009	
Boiler B09	Particulate matter	July 11, 2009	(c) Two copies of the test report shall be submitted to the Department within 60 days of the test. [s. NR 439.07(9), Wis. Adm. Code]  (2) At times specified in this permit, or when requested by the Department, the permittee shall perform emissions testing. [s. NR 439.075(1)(b), Wis. Adm. Code]
Boiler B11	Particulate matter	July 11, 2009	
Boiler B08	Particulate matter	June 14, 2008	
Boiler B08	Sulfur dioxide	May 11, 2009	
Boiler B08	Total Reduced Sulfur	March 02, 2009	
Boiler B10	Particulate matter	June 14, 2008	
Boiler B10	Sulfur dioxide	May 11, 2009	
Boiler B10	Total Reduced Sulfur	March 02, 2009	
Lime Kiln P12	Particulate matter	June 26, 2008	
(2) The permittee may request and the Department may grant a written waiver of the next scheduled biennial test if any of the following applies: (a) The source will be ceasing operation within one year of a scheduled test. (b) The most recently completed test demonstrates that emissions are 50 percent or less of the applicable emission limitation. (c) The source has not operated more than 360 hours in the previous 12-month period prior to the scheduled test date. (d) The most recently completed test, was conducted less than 12 months prior to the date that testing would be required under Condition O.2.a. (1). [s. NR 439.075(4)(a), Wis. Adm. Code]			

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>3. Compliance Reports</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>(1) The permittee shall submit the periodic reports required under these conditions to the Northeast Region Air Program, 2984 Shawano Ave, PO Box 10448, Green Bay, Wisconsin 54307-0448, attn. James Crawford, P.E. [s. NR 407.09(1)(c)3., Wis. Adm. Code]</p> <p>(2) The reports required under these conditions, except conditions O. 3. b. (1) and (2), shall also be submitted to U.S. EPA at Compliance Data – Wisconsin, Air and Radiation Division, U. S. EPA, 77 W. Jackson, Chicago, IL 60604, attn. Manoj Patel. [s. NR 407.09(1)(c)3., Wis. Adm. Code]</p> <p>(3) Submit a semiannual summary of the monitoring required by this permit, due March 1 for the period from July 1 to December 31 of the preceding year, and due September 1 for the period from January 1 to June 30 of the current year, each year that this permit is in effect. The content of the submittal is described in item D of Part II of this permit. In addition, semiannual MACT compliance reports may be combined with these reports. [s. NR 439.03(1)(b), Wis. Adm. Code]</p> <p>(4) Submit certification of compliance with the requirements of this permit, due March 1 for the period from January 1 to December 31 of the preceding year, each year that this permit is in effect. The content of the submittal is described in item N of Part II of this permit. [s. NR 439.03(1)(c), Wis. Adm. Code]</p>	<p>(1) <u>Quarterly Excess Emission Reports</u> shall be submitted within 30 days of the end of each calendar quarter for emissions from B09, B11, B08, B10 and P12, and contain the following information about each period of excess emissions:</p> <ul style="list-style-type: none"> <li>(a) the date, starting/ending times, duration,</li> <li>(b) the cause,</li> <li>(c) measures taken to reduce emissions,</li> <li>(d) monitoring system malfunctions/repairs, except zero and span checks,</li> <li>(e) Process down time,</li> <li>(f) When no excess emissions occurred and the monitoring system had no downtime, the report shall be filed stating such.</li> <li>(g) Periods of excess emissions shall be reported as follows: <ul style="list-style-type: none"> <li>(i) For opacity, any 6-minute period during which the average opacity exceeds the applicable emission limit.</li> <li>(ii) For sulfur dioxide, any 24-hour rolling average during which the average sulfur dioxide emissions exceed the applicable emission limitation.</li> <li>(iii) For total reduced sulfur, any 12-hour block average during which the average total reduced sulfur emissions exceed the applicable emission limitation.</li> </ul> </li> </ul> <p>[s. NR 439.09(10), Wis. Adm. Code]</p> <p>(2) <u>Quarterly Fuel Sampling Reports</u> shall be submitted within 30 days of the end of each calendar quarter for B07, B09, B11, B08 and P12, per condition O.5.b.(1).</p> <p>(3) <u>Quarterly MACT Excess Emission Reports</u> shall be submitted within 30 days of the end of each calendar quarter for B08, B10, P08, P10 and P12, if applicable as described in condition O.8.b.(7).</p> <p>(4) <u>Semiannual MACT compliance reports</u>: The permittee must submit semiannual compliance reports according to the requirements of:</p> <ul style="list-style-type: none"> <li>(a) ch. NR 460 Wis. Adm. Code for Subpart S sources,</li> <li>(b) 40 CFR §63.867, for Subpart MM sources,</li> <li>(c) 40 CFR §63.3400, for Subpart JJJJ sources.</li> </ul> <p>[ch. NR 460 Wis. Adm. Code and s. 285.65(13), Wis. Stats., and 40 CFR §63.867, 40 CFR §63.3400]</p>

<b>O. Conditions Applicable to the Entire Facility</b>			
<b>4. Stack Parameters</b>			
<b>a. Conditions</b>		<b>b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements</b>	
<p>(1)(a) Stacks may not be equipped with a rain hat nor discharge other than vertically.</p> <p>(b) The facility stacks listed below shall have heights no less than those listed, and have diameters or equivalent diameters no greater than those listed. [s. 285.65(3), Wis. Stats.]</p>		<p>(1) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. Such records shall clearly indicate the identification number of each stack. [ss. NR 407.09(1)(c)2. and NR 439.04(1)(d), Wis. Adm. Code]</p>	
<u>Stack No.</u>	<u>Height, ft.</u>	<u>Diameter, ft.</u>	
S07	161	5.50	
S09	290	8.50	
S08	186	6.50	
S10	186	6.00	
B08/B10by-pass	174	2.10	
S05	108	2.33	
S06	121	4.00	
S12	130	3.90	
S19	72	1.57	
S52	42	0.95	
S55	35	2.56	
S56A	36	2.03	
S56B	35.5	2.03	
S59A	35.4	1.12	
S59B	35.1	1.12	
S72	33	2.1	
S76	35	2 x 2	
S20	75	2.3	
S22	69	2.0	
S26	64	1.2	
S39	18	1.34	
S25	80	2.0	
S27	104	1.34	
S28	12	0.33	
S11	54	3.3	
S13	57	3.3 x 2.4	
S14	73	4.4	
S15	69	4.9	
S16	64	4.3	
S81	75	4.0	

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>5. Requirements for Residual Fuel Oil</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements</b>
(1) The permittee shall conduct monitoring and keep records in accordance with condition O. 5. b.	<p>(1) The permittee shall sample residual fuel oil and submit reports on residual fuel oil quality in the following manner:</p> <p>(a) Perform liquid fossil fuel sampling for each storage tank of residual fuel oil and analyze these samples for sulfur content and heat content according to the applicable methods and procedures for sampling and analysis in s. NR 439.08(2). Sampling shall be performed for each tank volume turnover or on a monthly basis.</p> <p>(b) Submit quarterly reports within 30 days following the end of each calendar quarter which include the following information for each month during the calendar quarter:</p> <ol style="list-style-type: none"> <li>1. Total quantity of residual fuel oil burned, and quantity burned by source, each expressed in thousands of gallons.</li> <li>2. Weighted average percent of the sulfur content of the residual fuel oil burned.</li> <li>3. Weighted average heat content expressed in Btu per gallon of residual fuel oil burned.</li> <li>4. Weighted average sulfur dioxide emission rate in terms of pounds of sulfur dioxide per million Btu heat input from the residual fuel oil burned.</li> </ol> <p>[ss. NR 439.085(3)(a) and NR 417.07(7)(a)4., Wis. Adm. Code]</p>
<b>6. Facility-Wide Emissions of Sulfur Dioxide</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements</b>
(1) Emissions may not exceed 9657 tons per year. <sup>10</sup> [s. NR 417.07(5)(g), Wis. Adm. Code]	(1) The permittee shall keep monthly records of the tons of sulfur dioxide emitted per month from all sources, based on a 12 month rolling average.

<sup>10</sup> Based on modeling, the facility emissions of SO<sub>2</sub> are not to exceed the maximum that was emitted in any year from 1979 through 1983. [s. NR 404, Wis. Adm. Code]



<b>O. Conditions Applicable to the Entire Facility</b>	
<b>7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Reference Methods, Recordkeeping and Monitoring Requirements</b>
<p>(1) At all times, including periods of startup, shutdown, and malfunction (SSM), the permittee shall operate and maintain any affected source, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown or malfunction, the general duty to minimize emissions requires that the permittee reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether the operation and maintenance procedures are being used will be based on information available to the department, which may include monitoring results; review of operation and maintenance procedures, including the SSM plan; review of operation and maintenance records; and inspections of the source. [s. NR 460.05(4)(a)1., Wis. Adm. Code]</p> <p>(2) The permittee shall develop and implement a written SSM plan that meets the requirements of s. NR 439.11 and describes, in detail, procedures for operating and maintaining the source during periods of SSM and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. This plan shall be developed by the permittee by the source's compliance date for that relevant standard. The plan shall be designed to achieve all of the following:</p> <p>(a) Ensure that, at all times, the permittee operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a</p>	<p>(1) When actions taken by the permittee during a startup, shutdown or malfunction, including actions taken to correct a malfunction, are consistent with the procedures specified in the affected source's SSM plan, the permittee shall keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a checklist, or other effective form of recordkeeping that confirms conformance with the SSM plan for that event. In addition, the permittee shall keep records of these events as specified in s. NR 460.09(2), including records of the occurrence and duration of each startup, shutdown or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. [s. NR 460.05(4)(c)3., Wis. Adm. Code]</p> <p>(2) If an action taken by the permittee during a startup, shutdown or malfunction, including an action taken to correct a malfunction, is not consistent with the procedures specified in the affected source's SSM plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the permittee shall record the actions taken for that event and shall report the actions taken within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with s. NR 460.09(4)(e), including records of the occurrence and duration of each startup, shutdown or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. [s. NR 460.05(4)(c)4., Wis. Adm. Code]</p> <p>(3) The permittee shall maintain at the affected source a current SSM plan and shall make the plan available upon request for inspection and copying by the department. In addition, if the SSM plan is subsequently revised, the permittee shall maintain at the affected source each previous version of the SSM plan, and shall make each previous version available for inspection and copying by the department for a period of 5 years after revision of the plan. The department</p>

## **O. Conditions Applicable to the Entire Facility**

### **7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code**

manner which satisfies the general duty to minimize emissions.

(b) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants.

(c) Reduce the reporting burden associated with periods of SSM (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation). [s. NR 460.05(4)(c)1., Wis. Adm. Code]

(3) During periods of SSM, the permittee shall operate and maintain the source, including associated air pollution control equipment, in accordance with the procedures specified in condition O.7.a(1). [40 CFR §63.102 (a)(4) as revised and s. 285.65(13), Wis. Stats.]

(4) The nonopacity emission standards in 40 CFR part 63 or in chs. NR 460 to 469 shall apply at all times except during periods of SSM, and as otherwise specified in an applicable subpart of 40 CFR part 63 or in an applicable provision of chs. NR 460 to 469. If a startup, shutdown or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the nonopacity emission standards set forth in this chapter, then those emission points shall still be required to comply with the nonopacity emission standards in 40 CFR part 63 or in chs. NR 460 to 469.

[s. NR 460.05(5), Wis. Adm. Code]

(5) The opacity and visible emission standards in 40 CFR part 63 and in chs. NR 460 to 469 shall apply at all times except during periods of SSM, and as otherwise specified in an applicable subpart of 40 CFR part 63 or in an applicable provision of chs. NR 460 to 469. If a startup, shutdown or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards in 40 CFR part 63 or in chs. NR 460 to 469, then those emission points shall still be required to comply with the opacity and visible emission standards in 40 CFR part 63 or in chs. NR 460

may at any time request in writing that the permittee submit a copy of any SSM plan, or a portion of the plan, which is maintained at the affected source or in the possession of the permittee. Upon receipt of a request, the permittee shall promptly submit a copy of the requested plan, or a portion of the plan, to the department. The department shall request that the permittee submit a particular SSM plan, or a portion of the plan, whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of that plan or portion of the plan. The permittee may elect to submit the required copy of any SSM plan to the department in an electronic format. If the permittee claims that any portion of a SSM plan is confidential business information entitled to protection from disclosure under 114 (c) of the Act (42 USC 7414(c)) or 40 CFR 2.301, the material which is claimed as confidential shall be clearly designated.

[s. NR 460.05(4)(c)5., Wis. Adm. Code]

(4) Based on the results of a determination made under condition O.7.a. (1)., the department may require that a permittee of an affected source make changes to the SSM plan for that source. The department shall require appropriate revisions to a SSM plan, if the department finds that the plan does any of the following:

a Does not address a startup, shutdown or malfunction event that has occurred.

b. Fails to provide for the operation of the source, including associated air pollution control and monitoring equipment, during a startup, shutdown or malfunction event in a manner consistent the general duty to minimize emissions.

c. Does not provide adequate procedures for correcting malfunctioning process and air pollution control and monitoring equipment as quickly as practicable.

d. Includes an event that does not meet the definition of startup, shutdown or malfunction listed in s. NR 460.02(37r), (36) and (24c), respectively.

[s. NR 460.05(4)(c)7., Wis. Adm. Code]

(5) The permittee may periodically revise the SSM plan for the affected source as necessary to satisfy the requirements of 40 CFR part 63 or to reflect changes in equipment or procedures at the affected source. Unless the department provides otherwise, the permittee may

## O. Conditions Applicable to the Entire Facility

### 7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code

to 469.

[s. NR 460.05(6)(a), Wis. Adm. Code]

(6) The permittee shall maintain and operate each continuous monitoring system (CMS) as specified in the permit, s. NR 460.07, and in a manner consistent with good air pollution control practices. [s. NR 460.07(3)(a), Wis. Adm. Code]

(7) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

1. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

2. All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation, which includes sampling, analyzing and data recording, for each successive 15-minute period.

[s. NR 460.07(3)(d), Wis. Adm. Code]

(8) Unless otherwise approved by the department, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

[s. NR 460.07(3)(e), Wis. Adm. Code]

(9) A CMS is out of control if any of the following occurs:

a. The zero (low-level), mid-level, if applicable, or high-level calibration drift exceeds 2 times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.

b. The CMS fails a performance test audit, including a cylinder gas audit, relative accuracy audit, relative accuracy test audit or linearity test audit.

make the revisions to the SSM plan without prior approval by the administrator or the department. However, each revision to a SSM plan shall be reported in the semiannual report. If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time the permittee developed the plan, the permittee shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the permittee makes any revision to the SSM plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under 40 CFR part 63, the revised plan may not take effect until after the permittee has provided a written notice describing the revision to the department.

[s. NR 460.05(4)(c)8., Wis. Adm. Code]

(6) The owner or operator of a CMS that is not a continuous parameter monitoring system (CPMS), which is installed in accordance with the provisions of 40 CFR part 63 and the applicable CMS performance specifications, shall check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under sub. (5)(c)1. and 2. The zero (low-level) and high-level calibration drifts shall be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds 2 times the limits of the applicable performance specifications in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases shall be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces shall be cleaned when the cumulative automatic zero

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code</b>	
c. The COMS calibration drift exceeds 2 times the limit in the applicable performance specification in the relevant standard. [s. NR 460.07(3)(g), Wis. Adm. Code]	compensation, if applicable, exceeds 4% opacity. The CPMS shall be calibrated prior to use for the purposes of complying with this section. The CPMS shall be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results shall be recorded and checked daily for proper operation. [s. NR 460.07(3)(f), Wis. Adm. Code]

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, selenium; mercury)</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>(1) The permittee may propose alternate particulate matter (PM) emission limits (i.e. a bubble limit) for existing affected sources (i.e B08, B10, P08, P10, P12) using the procedures of 40 CFR §63.865(a). Each proposal is subject to department approval and requires a revision of the operation permit. [40 CFR §63.862 (a)(1)(ii) and s. 285.65(13), Wis. Stats.]</p> <p>(2) An affected source that operates less than 6,300 hours per year shall comply with one of the following PM limits in lieu of a bubble limit established under condition O.8.a (1): 0.044 grains of PM per dry standard cubic foot (gr/dscf) corrected to 8 percent oxygen from a recovery boiler, 0.20 pounds of PM per dry ton of black liquor solids fired from a smelt dissolving tank, 0.064 grains of PM per dry standard cubic foot (gr/dscf) corrected to 10 percent oxygen from the lime kiln. [40 CFR §63.862 (a)(1)(iii) and s. 285.65(13), Wis. Stats.]</p> <p>(3) For each affected source the permittee must establish operating ranges for each monitoring parameter, using the test methods in 40 CFR §§63.7 and 63.865, at the following times: (a) During the initial performance test, or (b) Using parameter values recorded during previous</p>	<p>(1) Whenever a performance test is required the permittee shall measure emissions of particulate matter with U.S. EPA Method 5 or Method 29. The sampling time and sample volume for each run must be at least 60 minutes and 31.8 dscf. Water must be used as the cleanup solvent instead of acetone in the sample recovery procedure. The PM concentration must be corrected to the appropriate oxygen concentration as follows: <math display="block">C_{corr} = C_{meas} \times (21 - X) / (21 - Y)</math> Where: C<sub>corr</sub> = The measured concentration corrected for oxygen, gr/dscf; C<sub>meas</sub> = The measured concentration uncorrected for oxygen, gr/dscf; X = The corrected volumetric oxygen concentration (8 percent for kraft recovery furnaces and 10 percent for kraft lime kilns); and Y = The measured average volumetric oxygen concentration.</p> <p>Method 3A or 3B in appendix A of 40 CFR part 60 must be used to determine the oxygen concentration. The gas sample must be taken at the same time and at the same traverse points as the particulate sample.</p> <p>Method 17 may be used if a constant value of 0.004</p>

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills</b> (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, selenium; mercury)	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>performance tests, or</p> <p>(c) By conducting additional performance tests for the specific purpose of establishing operating ranges. The permittee must certify that all control techniques and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained. [40 CFR §63.864 (j) and s. 285.65(13), Wis. Stats.]</p> <p>(4) The permittee shall implement corrective action as specified in the startup, shutdown, and malfunction (SSM) plan when any of the following exceedances occur:</p> <p>(a) The average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity on stacks S08 or S10 (recovery boiler stacks controlled by ESPs);</p> <p>(b) Any 3-hour average parameter value monitored on the wet scrubbers of a smelt dissolving tank or lime kiln is outside the allowed range. [40 CFR §63.864 (k)(1) and s. 285.65(13), Wis. Stats.]</p> <p>(5) Owners or operators of all affected sources or process units are in violation of the standards of 40 CFR §63.862 if the following monitoring exceedances occur:</p> <p>(a) When opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period on stacks S08 or S10 (recovery boiler stacks that are controlled by ESPs);</p> <p>(b) Within a 6-month reporting period, when six or more 3-hour average parameter values monitored on the wet scrubber for a smelt dissolving tank are outside the allowed range, and the exceedances are not excused periods under the startup, shutdown, or malfunction provisions.</p> <p>(c) Within a 6-month reporting period, when six or more 3-hour average parameter values monitored on the wet scrubber for the lime kiln are outside the allowed range, and the exceedances are not excused periods under the startup, shutdown, or malfunction provisions.</p>	<p>gr/dscf is added to the results and the stack temperature is no greater than 400 °F. [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.]</p> <p>(2) The permittee must develop and implement a written SSM plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of SSM, and a program of corrective action for malfunctioning process and control systems used to comply with the standards. In addition to the information required in 40 CFR §63.6(3), the plan must include:</p> <p>(a) procedures for responding to any process parameter level that is inconsistent with the established operating range, including:</p> <p>(i) procedures to determine and record the cause of an operating parameter exceedance and the time the exceedance began and ended;</p> <p>(ii) corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance.</p> <p>(b) a maintenance schedule for each control technique that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance;</p> <p>(c) an inspection schedule for each continuous monitoring system (CMS) to ensure at least once in each 24-hour period that each CMS is properly functioning. [40 CFR §63.866(a) and s. 285.65(13), Wis. Stats.]</p> <p>(3) The permittee must maintain records whenever corrective action is required or a violation occurs. [40 CFR §63.866(b) and s. 285.65(13), Wis. Stats.]</p> <p>(4) The permittee must maintain records of the following information:</p> <p>(a) Records of black liquor solids firing rates in units of tons/day for all recovery boilers;</p> <p>(b) Records of CaO production rates in units of</p>

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills</b> (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, selenium; mercury)	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>No more than one exceedance is attributed to a given 24-hour period. [40 CFR §63.864 (k)(2) and s. 285.65(13), Wis. Stats.]</p>	<p>tons/day for the lime kiln; (c) Records of parameter monitoring data required under 40 CFR §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken; (d) Records and documentation of supporting calculations for compliance determinations made under 40 CFR §§63.865(a) through (e); (e) Records of monitoring parameter ranges established for each affected source or process unit; (f) Daily and cumulative-hour records by year, of the hours of operation of B08, B10, P08, P10 and P12. [40 CFR §63.866 (c) and ss. 285.65(13), Wis. Stats. and NR 407.09(4)(a), Wis. Adm. Code] (5) After the department has approved the PM emissions limits in 63.862(a)(1)(ii) for any process unit, the permittee must notify the department before any of the following actions are taken: (a)The air pollution control system for any process unit is modified or replaced; (b) Any affected unit is shut down for more than 60 consecutive days; (c)A continuous monitoring parameter for the process unit is changed; or (d) the black liquor solids firing rate for any kraft recovery boiler during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test. (e) any source subject to an alternate PM emission limit operates less than 6300 hours per year. [40 CFR §63.867 (b)(3) and ss. 285.65(13), Wis. Stats. and NR 407.09(4)(a), Wis. Adm. Code] (6) A kraft mill complying with the PM emissions limits in 40 CFR §63.862(a)(1)(ii) and seeking to perform the actions in condition O.8.b.(5)(a) or (b) must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation</p>

<b>O. Conditions Applicable to the Entire Facility</b>	
<b>8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills</b> (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, selenium; mercury)	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements</b>
	<p>required in 40 CFR §63.867 (b)(2) to the department. All alternate PM emissions limits are subject to approval by the department.[40 CFR §63.867 (b)(3) and s. 285.65(13), Wis. Stats.]</p> <p>(7) The permittee must submit a quarterly excess emissions report if measured parameters are as specified in conditions O.8.a.(4) or (5). This report must contain the information specified in 40 CFR §63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in conditions O.8.a.(4) or (5). Reporting excess emissions below the violation threshold of condition O.8.a.(5) does not constitute a violation of the applicable standard. [40 CFR §63.867 (c) and s. 285.65(13), Wis. Stats.]</p> <p>(8) When no exceedances of parameters have occurred, the permittee must submit a semiannual report stating that no excess emissions occurred during the reporting period. [40 CFR §63.867 (c)(1) and s. 285.65(13), Wis. Stats.]</p> <p>(9) The permittee may combine subpart S and subpart MM excess emissions and/or summary reports. [40 CFR §63.867 (c)(2) and s. 285.65(13), Wis. Stats.]</p>

<b>O. Conditions Applicable to the Entire Facility</b>
<b>9. Schedule for Ensuring Compliance with the Particulate Matter Emission Limit for Boiler B11</b>
<b>a. Conditions</b>
<p>(1) The permittee shall demonstrate that the particulate matter emission rate from boiler B11 does not exceed 0.10 pounds per MMBtu heat input no later than May 20, 2011. Between the permit issuance date and the final compliance date, May 20, 2011, emissions from boiler B11 shall not exceed 0.30 pounds per MMBtu heat input. The facility must complete the following actions by the dates indicated:</p> <p>(a) Complete engineering evaluation of control options by November 20, 2008.</p> <p>(b) Selection of control option by February 20, 2009.</p> <p>(c) Complete engineering and design of new control equipment by November 20, 2009.</p> <p>(d) Complete construction of new control equipment by August 20, 2010.</p> <p>(e) Complete shakedown of new control equipment and commence normal operation by November 20, 2010.</p> <p>(f) Conduct stack test to demonstrate compliance with 0.1 lb/MMBtu heat input by February 20, 2011.</p> <p>(2) Semiannual progress reports shall be submitted to the Department detailing the efforts and upcoming plans made in demonstrating compliance with the particulate matter emission limit for boiler B11 of 0.10 pounds per MMBtu heat input. These progress reports shall summarize all of the actions and the dates that these actions were taken towards demonstrating compliance over the past 6 months. The reports should also present the expected actions that will be undertaken in each upcoming 6-month period. Notwithstanding the progress report schedule outlined in Condition O.9.a.(1), the final progress report shall be submitted no later than May 20, 2011.</p> <p>[s. 285.64(1), Wis. Stats., and ss. NR 407.09(4)(b) and NR 439.07(10), Wis. Adm. Code]</p>
<b>b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>(1) The permittee shall submit the semiannual progress reports and any additional information required by condition O.9.a.(1) to the Northeast Region Air Program, 2984 Shawano Ave, PO Box 10448, Green Bay, Wisconsin 54307-0448, attn. James Crawford, P.E., by the dates indicated in condition O.9.a.(1). If the permittee is able to demonstrate compliance with the ambient air quality standards before May 20, 2011, no further semiannual reports need be submitted.</p> <p>[s. 285.64(1), Wis. Stats., and NR 407.09(4)(b), Wis. Adm. Code.]</p>



<b>O. Conditions Applicable to the Entire Facility</b>	
<b>10. Facility-Wide Emissions of ch. NR 445 Hazardous Air Pollutants (HAPs)</b>	
<b>a. Conditions</b>	<b>b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements</b>
<p>(1) * Emissions of each of the following HAPs may not exceeded the following.</p> <p>(a) formaldehyde – 10952.6 pounds per year</p> <p>(b) nickel - 6881.9 pounds per year</p> <p>(c) acetaldehyde – 11929 pounds per year</p> <p>[s. NR 445.05(3), Wis. Adm. Code] <sup>11</sup></p>	<p>(1) * The emission rate of each HAP listed under condition O.10.a.(1) shall be reported annually on the facility air inventory.</p> <p>[s. NR 407.09(4)(a)3.b., Wis. Adm. Code]</p>

---

<sup>11</sup> The emission limitations were the rates reviewed when BACT was established and modeled in the NR 445 BACT analysis.